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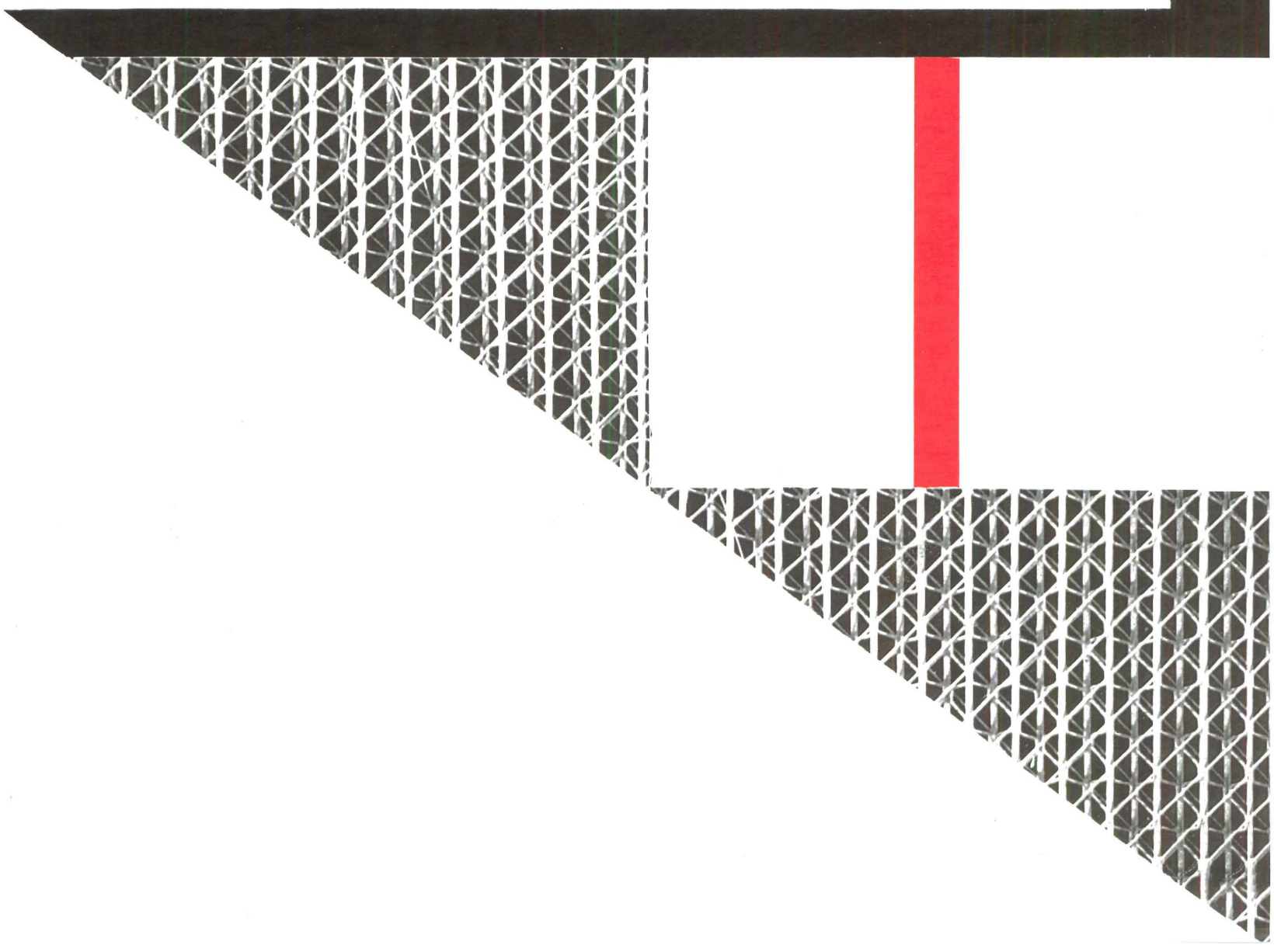

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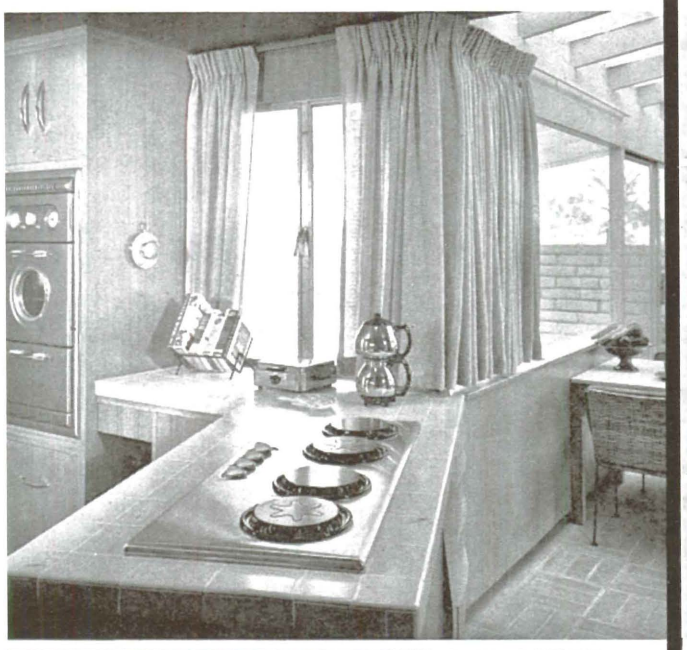

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The material in this issue was conceived and arranged by students under the direction of the faculty of the Institute of Design. The students and faculty have undertaken the responsibility of using these pages to state objectives and to clarify methods.

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VOL. 69, NO. 7

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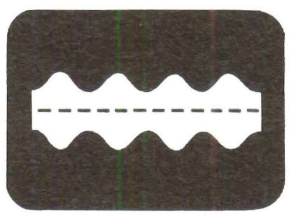

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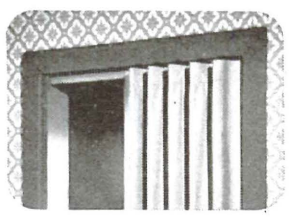

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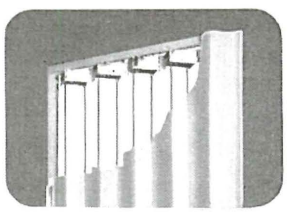

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ART

LOUISE BALLARD

SAN FRANCISCO

The Matisse show has jolted the San Francisco art world with the sharpness of an earthquake. The first major exhibition San Francisco has seen since the Vienna exhibition, it provides all the strength and power and sureness of touch which have been so conspicuously lacking in most of this season's exhibitions. Even though the most revolutionary of the canvasses date back to the period from 1905 to 1916, they still have a distinct shock value in the unexpectedness of their forms and in their almost fierce originality; and placed against their contemporary background when the gentle Nabis were the "avant-garde" their strangeness must have seemed incredible.

Apparently, for some the strangeness has not dissipated with the years for among the two thousand or more devotees of art who crowded into the galleries of the San Francisco Museum for the preview, there were those overheard to ask, "Is this art?"—"What does it mean?"—"Why aren't the nudes beautiful?" And I am sure that somewhere someone said, "A child could do better."

Yet, I also am sure, that in the presence of these pictures the hackneyed phrases failed to ring with the conviction of superior knowledge and taste and instead expressed a bewildered sense of "missing something," something worth experiencing, a feeling not entirely engendered by awareness that Matisse is one of the great contemporary artists.

In the same fashion, I interpret the serious silence of the seventy art students I took to the exhibitions as a tribute to the intensity of impression which Matisse is able to invoke. While the professional artists have at long last the record before them of some of the daring experiments in form and color that laid the foundation for all subsequent explorations.

A certain amount of knowledge of the nature of these experiments and of the intentions of Matisse is necessary to a full appreciation of his work. He himself says, ". . . the purpose of a painter must not be conceived as separate from his pictorial means. . . ." and I think he is as intellectual as Cezanne in his clear presentation and solution of specific problems. Yet these problems are not self-evident to those accustomed to other modes of expression, despite the Fauve hope that by reducing their color and form to a more primitive aspect, they might reach a level of universal appeal and understanding.

Nothing is more misleading to the uninitiated than the oft-quoted statement of Matisse that he dreams of "an art which might be for every mental worker . . . like a mental soother, something like a good armchair in which to rest from physical fatigue;" for this implies that the emotional stimulation which certainly is so powerful in Matisse's work will be interpreted as "an art of balance, of purity, and serenity" and will be received with grati-

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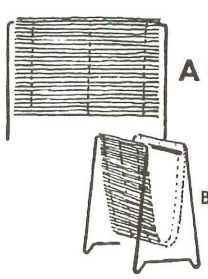

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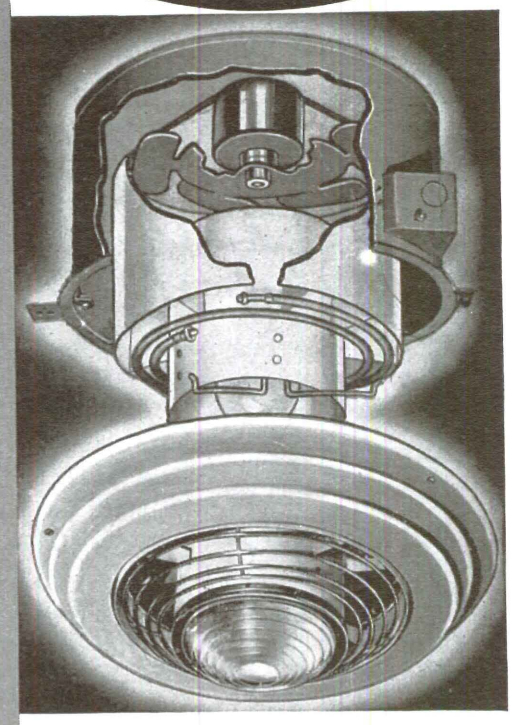

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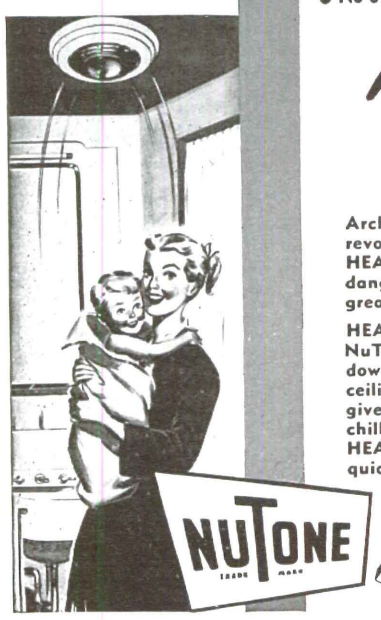

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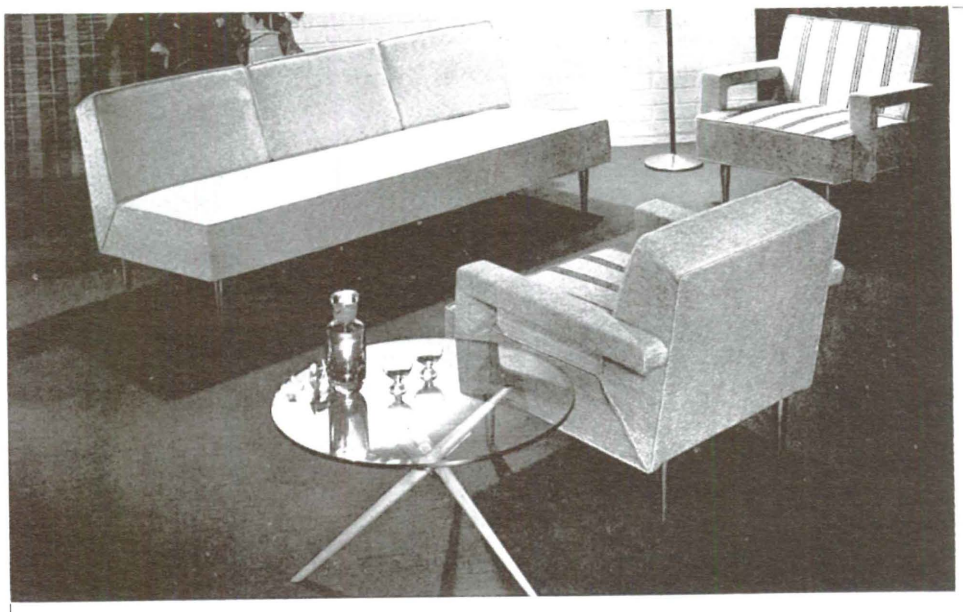
tude and understanding. Unfortunately, no allowance is made for the observer's preconceived notions of what constitutes "art."

Therefore, I shall point out the obvious, that Matisse from first to last, is concerned with color, how it acts, what can be done with it. Though he is one of the great innovators he is far more than a mere manipulator of pleasing and sensuous color combinations. Again and again, throughout his life, in one way or another, he sets himself the problem of creating form and space and interpreting his brilliant impressions of the real world through the use of color alone.

The usual illusionistic devices are discarded. Modeling in light and dark does not occur in his canvases. In fact tone does not exist in his pictures. Perspective vanishes. There is merely the faintest imprint of the orderly system of converging lines and receeding planes that make up our pictorial concept of the passing world. Color itself foreswears any fidelity to visual actuality, to local color, to the accidents of illumination and reflection. Instead, it is so clean, so strong, so pure that every hue in every inch of the canvas calls with equal urgency for our attention. This might well be artistic chaos. But in the hands of Matisse, the roaring lions and tigers obey the crack of the master's whip and take their places in the ring and perform the tricks they are ordered to do. It is a demonstration of the power of the organizing will over unruly materials. It takes place in a circumscribed area, removed from the jungle of the total visual world, but within its deliberately chosen limits, it is a feat not without danger and requiring great courage and skill. Matisse brings it off every time!

Without ever imitating the real world, he forces his high-keyed blues and yellows, and oranges and pinks, and reds and greens to take their relative positions in shallow space, so that he is able to create a symbolic expression of the three-dimensional world. The fact that Matisse himself is first activated by his impressions of nature and that he never loses contact completely with our common environment is what makes his work so meaningful. As Alfred Barr, Jr. has said of Cubism, "Always there were vestiges of 'nature' whether a landscape, a figure, or a still-life. And these vestiges however slight remained essentially important for they revealed the **point of departure**, the degree of transformation undergone by the original image; they supplied the tense cord which anchored the picture to common reality yet gave the measure of its daring distance." So that it seems to me that it is this which makes Matisse's work so compelling and carries it far beyond the scope of the pure abstraction with its Dada tile. Certainly, to miss the terms of the proposition which Matisse demonstrates and proves with the precision of a geometry master is to fail to grasp the measure of his achievement and to leave one with only the yardstick of degree of likeness to nature with which to evaluate his art. So that insight into Matisse's created world is never gained.

However, for those who know the theme of Matisse, his variations seem endless and are nearly all exciting. The Fauve period of 1905-06 is rather scantily represented in this exhibition but the brightest patchwork of the **Woman with the Hat** and the bold curves of the **Young Sailor II** already emphasize the relation of pure color to form. His unprecedented interpretation of the volumes of the human body is further developed in the great **Blue Nude** 1907 and the **Bathers with a Turtle** 1908, where his line does not act as a contour as much as a structural wall which contains the volumes. The studied simplicity, the calculated distortions in the interest of directional movement are more obvious in the



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study for the **Dance,** and even here the lack of detail, the flatness of the areas point up the structural role of color.

To me, the most fascinating period is that between 1911 and 1916 when Matisse shows the effects of the Cubist movement and creates ambiguous canvases that can be looked at as either two-dimensional or three-dimensional compositions. In his interiors, an open door or window reveals his interest in the contrasts of indoor and outdoor light and color, yet the indoor colors are as intense as the outdoor ones. His love of covering a flat surface with bold pattern appears and further enhances the conflict of the flat colored areas and the need to relate them in space. If he uses even the remnants of linear perspective as in the **Red Studio,** 1911, he counteracts its effect by swiping venetian red over walls, floor, everything except his paintings, sculpture, and ceramics in the room. In this period, the exhibition includes among others the **Goldfish and Sculpture** 1911, **Park in Tangier** 1911-12, **The Blue Window** 1911, **Interior with Goldfish** 1914, **Goldfish** 1915 and **Piano Lesson,** 1916. The last and the **Window** 1916 are particularly interesting examples of space created with flat areas of color.

The period of the twenties is more decorative and more limited in its effects. Typical is the famous **Decorative Figure on an Ornamental Background,** 1927, where Matisse has complicated and embellished his problem of form by placing his nude in front of a splashingly ornate wallpaper, a baroque mirror, a potted plant, and seating her on a boldly patterned rug. Everything is equally brilliant and yet the nude holds its proper place, Matisse having cheated only the least bit by placing a shadow behind one side of her head.

The arabesque lines and primary colors of the thirties I find a little inane, principally because the tie with real experience is now very tenuous. However, this style is well displayed in **The Conservatory** 1937-38 and **Music** 1939.

Then in a remarkable fashion during the forties, the septagenarian Matisse returns to the vigor and boldness of his early years with such crashing color harmonies as are seen in the **Large Inteior in Red** 1948 and the scintillating **Egyptian Curtain** 1948. In both of these the old problem of interior contrasted with outdoor light is solved with the most incredible intensity of color.

Kodachromes give a glimpse of the calm perfection of the chapel at Venice, an impression which is not entirely destroyed by the display of paper models of the stained glass windows.

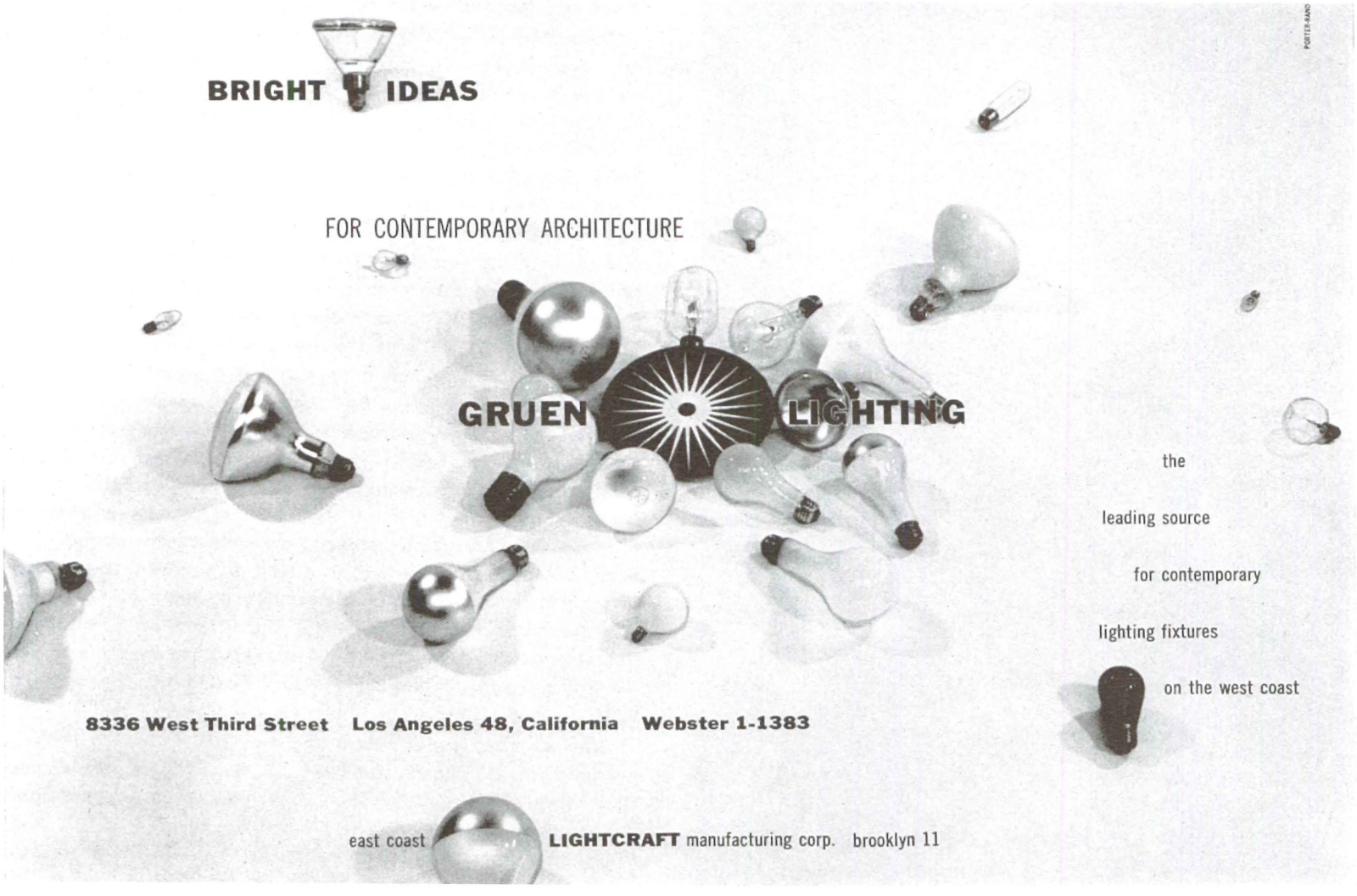
Altogether, the Matisse exhibition offers the West Coast a rare and rich opportunity for profound esthetic pleasure.

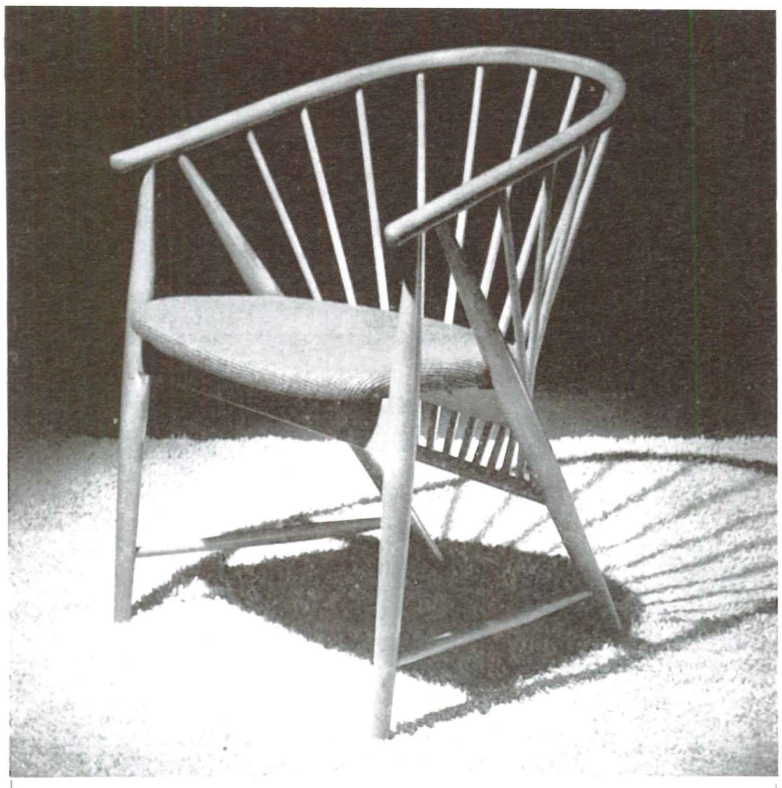
MUSIC

PETER YATES

TUNING AND TEMPERAMENT: **A Historical Survey** by J. Murray Barbour; East Lansing: Michigan State College Press; 228 pp.; $4.

Several months ago I wrote a brief discussion of this valuable book for the **Saturday Review.** I criticized it not for what it included but for what it omitted: the influence of temperament on music between the Bachs and Schubert; the esthetic effect of temperament on the writing and performance of music, except as





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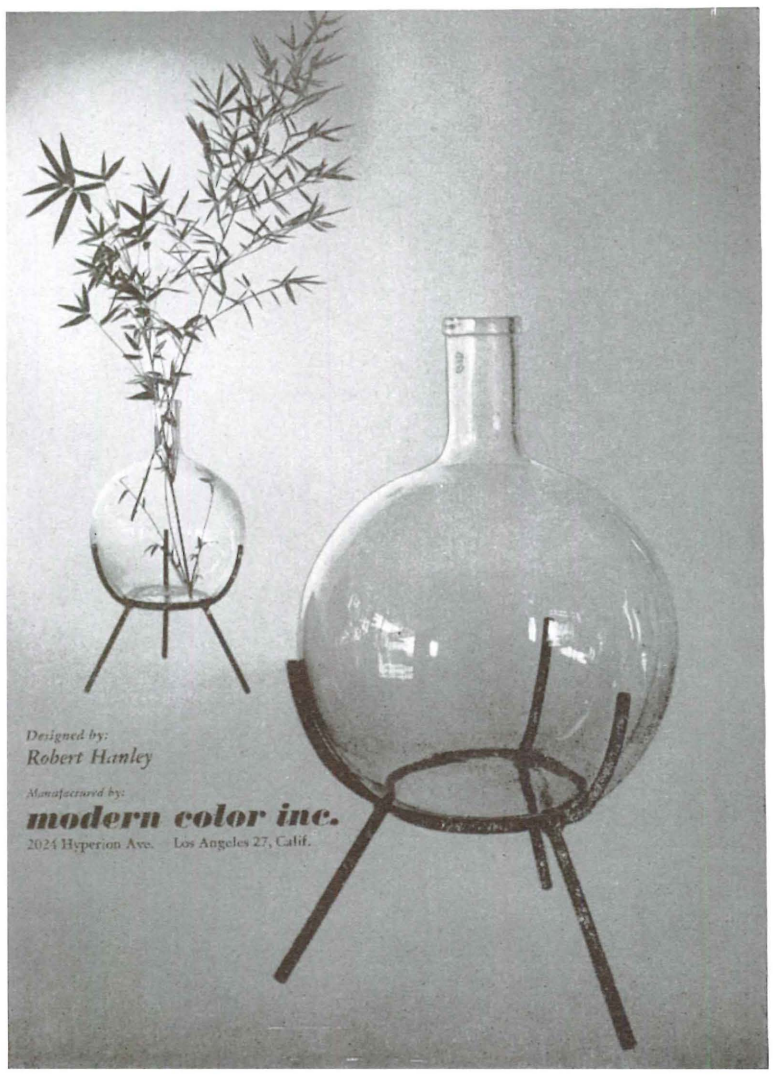

this may be deduced from mathematical ratios; the relation of tuning to the playing of instruments, to the theory of "good" and "bad" notes, to the use of embellishment and rhythmic alteration as means of intensifying or avoiding the more discordant intervals, and to the theory of the Affections.

Mr. Barbour objected to these criticisms, saying that they reminded him of the countryman who bought a Bible and afterwards wanted his money back because it did not contain an almanac. I replied by quoting Fabre's call upon the insects to bear witness for him against the "dryness of the schools:" "Come here . . . you, the sting-bearers, and you, the wing-cased armor-clads. . . . Your evidence is unanimous: yes, my pages, though they bristle not with hollow formulas nor learned smatterings, are the exact narrative of facts observed . . ." This was not quite fair, but then neither was Mr. Barbour. And I pointed out also that for the farmer, in some practical matters, an almanac may be more useful than the Bible.

It is the ancient argument between the scholar who collects and reproduces all the documented facts and the experimentalist who puts to work what facts he has observed and learns in practice how these may be used. The two approaches came together a few weeks ago, when Wesley Kuhnle and Sol Babitz, practical experimentalists in the art of tuning instruments and performing the old music, played a program on instruments tuned in the old style, and two experts came, loaded with stroboconn and notebooks, to make a thorough study of what had been accomplished. When they have analyzed their results and compared these with the information which Mr. Barbour has compiled, we shall know how closely Wesley Kuhnle has learned to reproduce the tuning methods of which we have record that were used during the xvii and xviii centuries. I believe it will be found that these methods and results have been quite accurately reproduced.

Theorizing about temperament and tuning is as ancient as the art. Such musician-theorists as Zarlino, Schlick, Aron, Marpurg, Neidhardt, Werckmeister, and Rameau have left extensive records of actual and theoretical temperaments and the application of many of these in practical tuning. J. Murray Barbour of Michigan State College is their modern spokesman and, to my knowledge, the first in our own time to revive the study of their art. Mr. Barbour is a Doctor of Music, a mathematician, an expert musicologist, and a practicing musician. This winter he has helped in the presentation of two programs I would go a long way to hear, an entire evening of Monteverdi and an evening of early songs, for both of which he prepared the instrumental parts.

Mr. Barbour's book on tuning and temperament is, as far as I am able to discover, the first complete compendium of information on this subject which has ever been compiled. For some reason he has chosen to cut off his studies with the works of Sebastion Bach, omitting entirely the interesting later developments. He has chosen to do this, probably, because of the fact that the literature of the subject practically ceases at the time of Bach, and thereafter the choice of tunings altered with the growth of musical forms. My own interest began where his ends, and I first became aware of the esthetic significance of meantone and later of well-tempered tunings in applying these to the music of Domenico Scarlatti, Haydn, Mozart, Beethoven, Clementi, and Field.

After so many qualifications you may ask, but what **is** the importance of Mr. Barbour's book on tuning and temperament? Until recently the same question might have been directed against that greatest of studies in the playing of the older music, Arnold Dolmetsch's **Interpretation of the Music of the xvii and xviii Centuries.** The **Interpretation** collects into one volume and to some

extent collates all the written information we have about the performance of xvii and xviii century music, except temperament. Mr. Barbour's book fills in this vital chapter and does so with such a wealth of information that henceforward no student or performer of the older music will be able to ignore this aspect of it. Though progress will be slow, we may live to see the time when knowledge of tuning will be as significant in the playing of the older music, especially the keyboard music, as knowledge of embellishment is beginning to be at the present time.

It was such a program that Wesley Kuhnle and Sol Babitz offered here for Evenings on the Roof, possibly the first of its kind. Although the violin also was played in relation to the mean tone temperament, the principal interest in this regard was centered in the harpsichords. There were three of them: a single manual Townsend and White, built in England in 1590 and restored by Robert Johnson, the requirements of its string lengths indicating that it was intended to be tuned at xvii century chamber pitch, a minor third above our present (440) standard pitch; a modern German two manual instrument by Neupert, tuned in meantone with the modern enharmonic intervals all flat (D-E-A-B); and the single manual harpsichord which Mr. Kuhnle had finished building just four days before the concert, also tuned in meantone, with the same enharmonic intervals of the modern scale tuned C sharp, D sharp, G sharp, B flat. Both the old and the new single manual instruments are of the style which has two sets of jacks plucking the eight-foot strings in different positions, giving two distinct registrations, and a four-foot registration. Both the modern instruments were tuned at the commoner xviii century pitch, approximately a half-step below our present (440) standard pitch. This lower pitch was used also for the violin. With the two harpsichords tuned sharp and flat Mr. Kuhnle was able to play, if he wished, all twenty-four keys, though the keys with the greater number of sharps or flats would have sounded rather dissonant to modern ears.

Meantone tuning was in fairly general use for nearly four hundred years and was the predominant tuning for at least two hundred, until approximately the last five years of the xviii century. Meantone may be defined as a tuning in which all the more common diatonic major thirds are pure, in comparison with the quite dissonant compromise which passes for a major third in equal temperament. The advantages of meantone derive from the fact that every key has a different harmonic composition or color and therefore a distinct esthetic or emotional effect. From this difference emerged the theory of the Affections, the convention that every key has its unique esthetic-emotional connotation, a theory which survives today, although the reason for it no longer exists in present-day tuning. This theory governed the choice of key in which a piece of music should be written and, to some extent, the character of its themes. Because of these differences in interval relationships, which no longer exist in equal temperament, it was possible to inflect a melody by modulation through various keys and to sweeten or intensify the harmony by choice of key. Wolf tones, dissonances which occurred in every key by reason of certain less pure relationships, could be used to point a phrase when desired, in the manner of a sforzato, or could be avoided by ornamenting them, by displacing them rhythmically, or when necessary omitting them entirely, the last a very common practice in compositions of the period. The use and placement of more or less dissonant tones gave rise to the terms "good" notes and "bad" notes, although the esthetic signification of these terms went beyond the simple reference to temperament.

Well-tempered tuning was developed as a variant of meantone. There is no single tuning which may be called "well-

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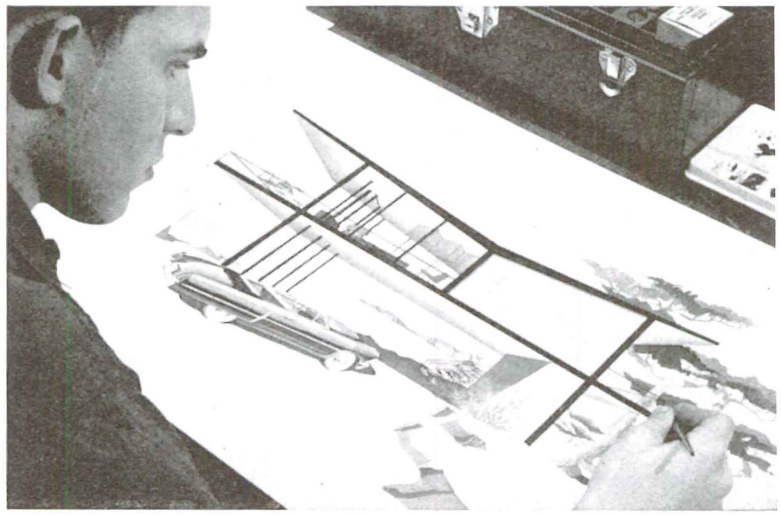
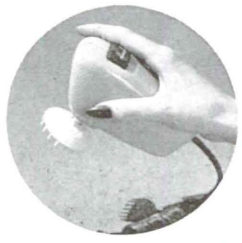


Student Product Designs



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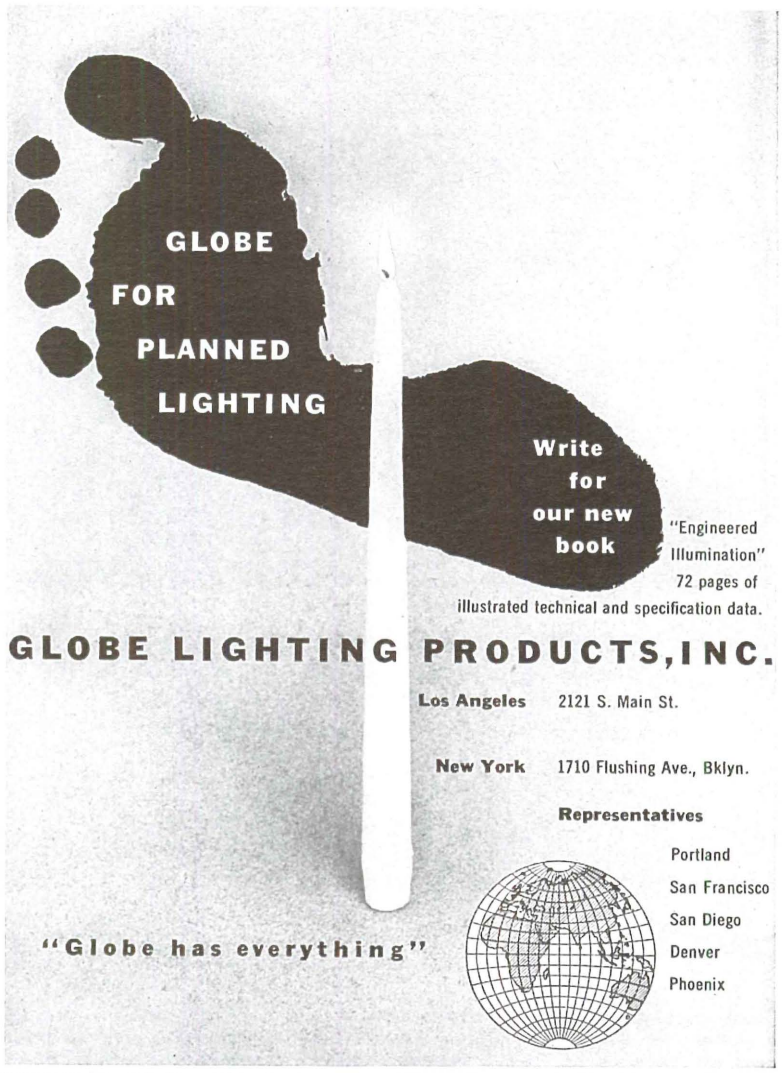

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tempered." The modification of tunings which produced more or less useful well-tempered variants was extensively studied; many practical and theoretical tunings were invented and set down; and Mr. Barbour's book gives a thorough account of these. The most famous well-tempered tuning, used by Sebastian Bach, lies very near our equal temperament, though we have no record of it and can estimate its composition only by applying such a tuning to those works of Bach which are plainly not for meantone. It is interesting that the preferred well-tempered tuning developed in practice by Mr. Kuhnle and that arrived at by Mr. Barbour through mathematical study of intervals are found to be nearly alike, when Mr. Kuhnle's tuning ratios are measured by stroboconn. The ratios will vary slightly, of course, for mechanical reasons, each time the temperament is set.

Because of the arbitrary historical termination he has put to his studies, Mr. Barbour has avoided some of the most interesting problems in the history of temperament, those which have to do with the history of well-tempered tuning, the survival of meantone, and the eventual predominance of equal temperament. He has demonstrated, by applying harmonic ratios to the keyboard works of Francois Couperin and Sebastian Bach, that the former would require a variable meantone, that is with the enharmonic tones returned in various combinations, sharp or flat, to negotiate the **27 Orders** without running into wolves. The keyboard works by Bach, however, show a preponderance of situations, especially in the organ music, which indicate that a well-tempered tuning must have been used. If one grant that Bach's church organ was tuned by him to a well-tempered tuning, the extent of such harmonies in his organ music may be explained. At the same time it is probable that those pieces which he used for testing new organs would have been confined to meantone. Organ builders, including Silbermann, adhered to a conservatively modified meantone, which allowed less freedom to modulate among keys than the tuning evidentaly preferred by Bach. But this was not the equivalent of our modern equal temperament, because we have C. P. E. Bach's testimony that a "good tuning" allows playing in all 24 keys and in full chords, "notwithstanding a slight difference in the ratios."

Well-tempered tuning, that is to say, retains the inflective harmonic distinction among keys while coming as near as possible without losing these to the harmonic unanimity of equal temperament. Thus every modulation is distinguished by a change of color, melodic relationships are intensified by harmonic inflection, and the over-all flatness of a single unanimous harmony, without change or inflection, such as we are accustomed to hearing from the modern piano tuned to equal temperament, is still avoided. Though the difference in interval-ratios between Mr. Kuhnle's or Mr. Barbour's well-tempered and the standard equal temperament is mathematically slight, the difference in quality, by accumulation of small inequalities in the ratios, is very noticeable. For Bach, Mozart, or Beethoven the well-tempered tuning is incomparably the more beautiful; for all other keyboard composers before Beethoven, including Haydn, except a few late pieces, Clementi, and Field, the variable meantone will produce the best musical results, though listeners unadjusted to varying degrees of dissonance within consonance will probably react at first by saying only, "It sounds out of tune."

Mr. Barbour's interest in gathering information about tuning has not yet made him advocate putting these tunings to use. He now doubtless disowns the rather furious assertion, in an earlier article on his subject, to the effect that people who enjoy hearing music played in meantone are the same sort who enjoy dissonant contemporary music. The statement is indeed quite true and expressive of the profound change in musical adaptation which

has been taking place since the acceptance of polytonality and the twelve-tone method. It is probable that others will eventually come to prefer, as I do, the distinction among voices produced by playing the earlier music in meantone tuning, even on piano, to the consonant muddle which transforms the counterpoint of Pachelbel or Handel into random successions of chords, which is at the bottom of piano arrangements with bass doubled in the octave and no corresponding higher overtones, which has brought forth the noisy welter of orchestral transcriptions and dimmed the intrinsic beauty of the earlier music as it was intended to sound in its own tuning—and of course on its own instruments. Thickened chords, octave basses, overloaded orchestrations, and the spasmodic, fancy contrasts of registration generally preferred nowadays by organists and harpsichordists to give an effect of orchestral coloring or match the heavy brilliance of piano show an effort to find some substitute for the more subtle coloring and clarity of the older tunings.

The practice of Wesley Kuhnle and Sol Babitz is neither archaic nor peculiar but a revival of the older music, and of the sound and the manner in which it was played. Their work, while it applies to music of the past, leads as directly towards the new possibilities of the future and may be as potent for the extension of the musical idiom as the creative art of twentieth century composers. It contributes to the breakdown of vertical harmony and the rediscovery of music as a polyphony of contrasting and commingling harmonies and voices. It enlarges our appreciation of the dissonant component in harmony, the individuality of keys, the use for architecture and design of very slight sound modifications which had been all too nearly lost during the period of the predominance of equal temperament and exaggerated vertical harmonic consonance. For them, as it will be for many others, Mr. Barbour's work on tuning and temperament is the indispensable source-book.

ANNOUNCEMENT

Chicago's Institute of Design of Illinois Institute of Technology has been invited to show Europe how to teach modern design.

A team of five of the Institute's design authorities is conducting a workshop on experimental design practice and giving several major lectures at a design seminar in Oslo, Norway, June 5-25.

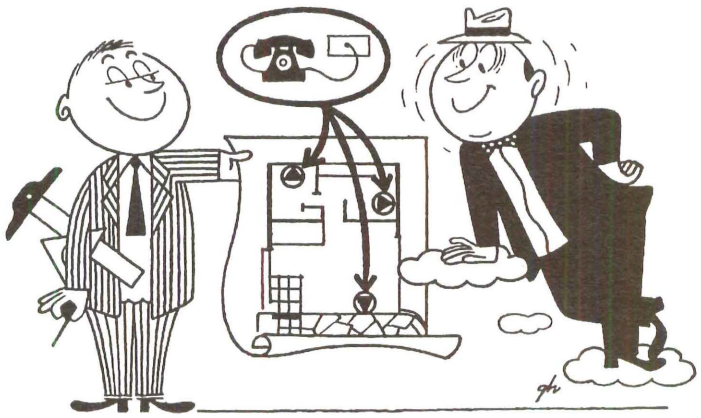
The team and a former member of the Institute faculty have the distinction of being the only U. S. representatives on the program.

This signal honor came as a result of a two-year survey of U. S. schools of design by Mr. and Mrs. Arne Korsmo, of Oslo, recently. Mr. Korsmo, a recognized design expert, is a member of the faculty of one of the five sponsoring schools.

The Institute's team is made up of Konrad Wachsmann, architect-inventor; Hugo Weber, sculptor, painter; John Walley, industrial designer, exhibition painter and sculptor; his wife, Jano, ceramist and jewelry designer; and Ray Pearson, architect.

William Friedman, of Minneapolis, an architect, is the former Institute faculty member making the trip.

European educators, industrialists, and craftsmen will attend the 20-day event at Statens handverks-og kunstindustriskole in Oslo.



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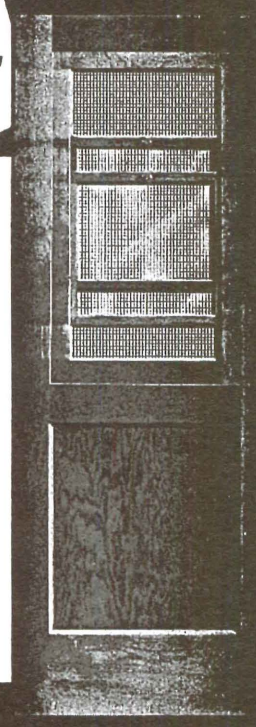

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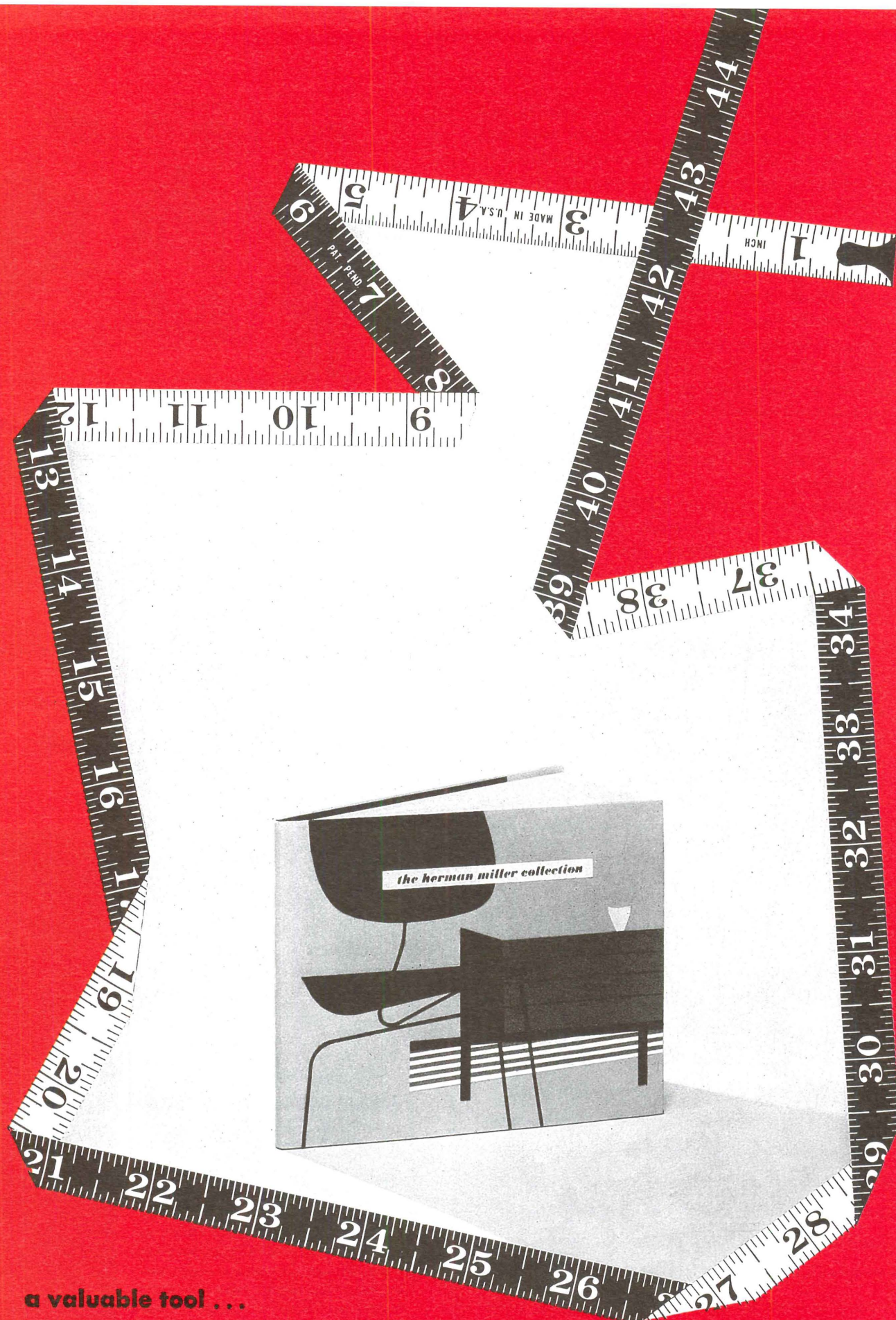

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in passing

Lazlo Moholy-Nagy; born 1895, died 1946. Founder of the Institute of Design.

"The industrial revolution opened up a new dimension—the dimension of a new science and a new technology which could be used for the realization of all-embracing relationships. Contemporary man threw himself into the experience of these new relationships. But saturated with old ideologies, he approached the new dimension with obsolete practices and failed to translate his newly gained experience into emotional language and cultural reality. The result has been and still is misery and conflict, brutality and anguish, unemployment and war."

"We can hope for improvement only after we have surrendered metaphysical interpretations in favor of a scientific analysis of human history. Tradition is man-made and must be constantly re-evaluated."

"The fight for a new social and economic order is a constant process, but it is not the task of schools to make a decision as to the theories which should be victorious. The duty of the educator is to uncover the forces which form society so that the individual, equipped with the knowledge of the processes, may form his own opinion and make a decision about his position in the world."

"Design has many connotations. It is the organization of materials and processes in the most productive, economic way, in a harmonious balance of all elements necessary for a certain function. It is not a matter of facade, of mere external appearance; rather it is the essence of products and institutions, penetrating and comprehensive. Designing is a complex and intricate task. It is the integration of technological, social and economic requirements, biological necessities, and the psychophysical effects of materials, shape, color, volume, and space: thinking in relationships. The designer must see the periphery as well as the core, the immediate and the ultimate, at least in the biological sense. He must anchor his special job in the complex whole. The designer must be trained not only in the use of materials and various skills, but also in appreciation of organic functions and planning. He must know that design is indivisible, that the internal and external characteristics of a dish, a chair, a table, a machine, painting, sculpture, are not to be separated. The idea of design and the profession of the designer has to be transformed from the notion of a specialist function into a generally valid attitude of resourcefulness and inventiveness which allows projects to be seen not in isolation but in relationship with the need of the individual and the community."

"The Institute of Design, Chicago, is a laboratory for new education. Founded for the training of artists, industrial designers, photographers and teachers, it embodies the principles and educational methods of the Bauhaus modified in accordance with the circumstances and demands of this country."

"Among the exercises, one of the most important is the re-examination of tools and materials so that a given work can be executed in terms of basic qualities and characteristics. One could call this approach an artless, unprejudiced search which, first on a modest but later on a growing scale, conditions one to creative thinking and acting, to inventiveness and intuitive assurance of judgment. This idea has an affinity with the kindergarten play technique as well as with the apprentice education of the old craftsman. There is, however, a great difference in orientation. The "play" of the grownup, while it offers opportunity for relaxed explorations and collection of data, has implicitly a constructive direction. Through the collaboration of teachers who have the power of discrimination, the significant points are quickly recognized in the experiments and through subtle leadership the "play" is brought to purposeful results. An education in the crafts develops responsibility toward the product as a whole and through this it teaches the student discipline. But the crafts are not emphasized in opposition to machine work. The machine is understood as a very efficient "tool" which—if properly used—will serve the creative intention as well as the traditional handtool. . . ."

"The problem of our generation is to bring the intellectual and emotional, the social and technological components into balanced play; to learn to see and feel them in relationship. Without this interrelatedness there remains only the disjunctive technical skill of handling human affairs, a rigidity stifling biological and social impulses; a memorized, not a lived life."

Quotations from L. Moholy-Nagy, "Vision in Motion," Chicago, Paul Theobald, 1947 (I. D. publication)

OPEN HOUSE: INSTITUTE OF DESIGN IN 1952

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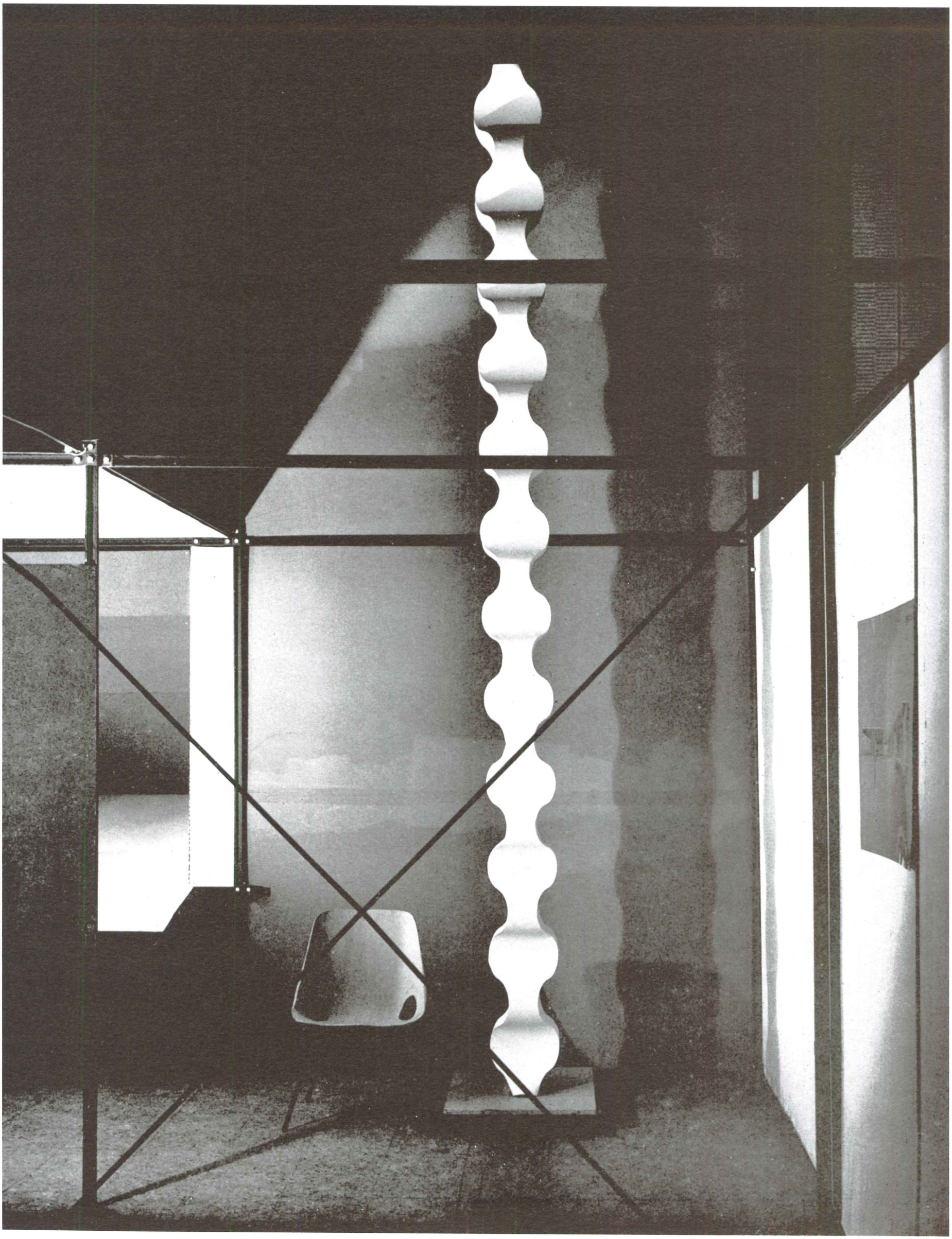
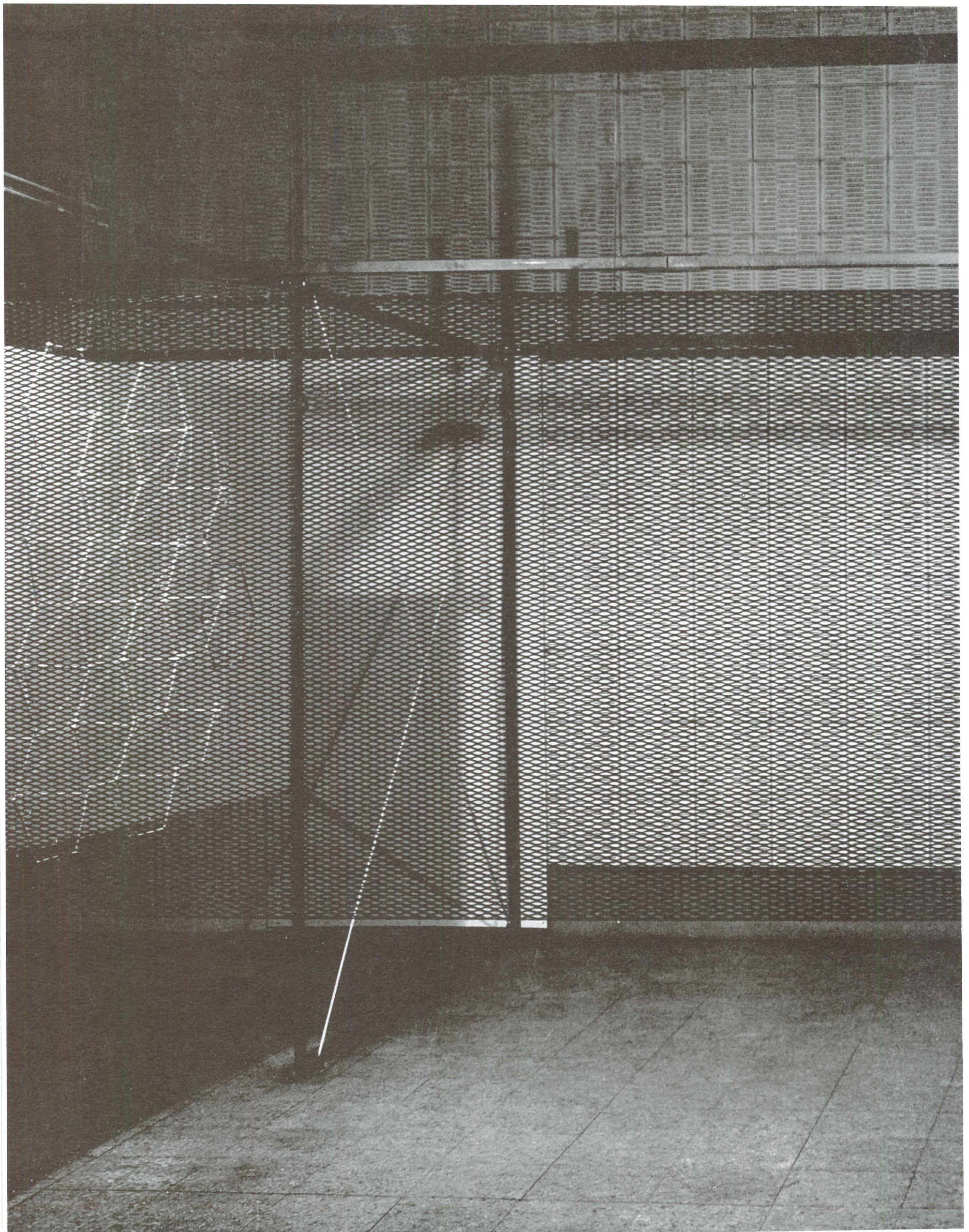
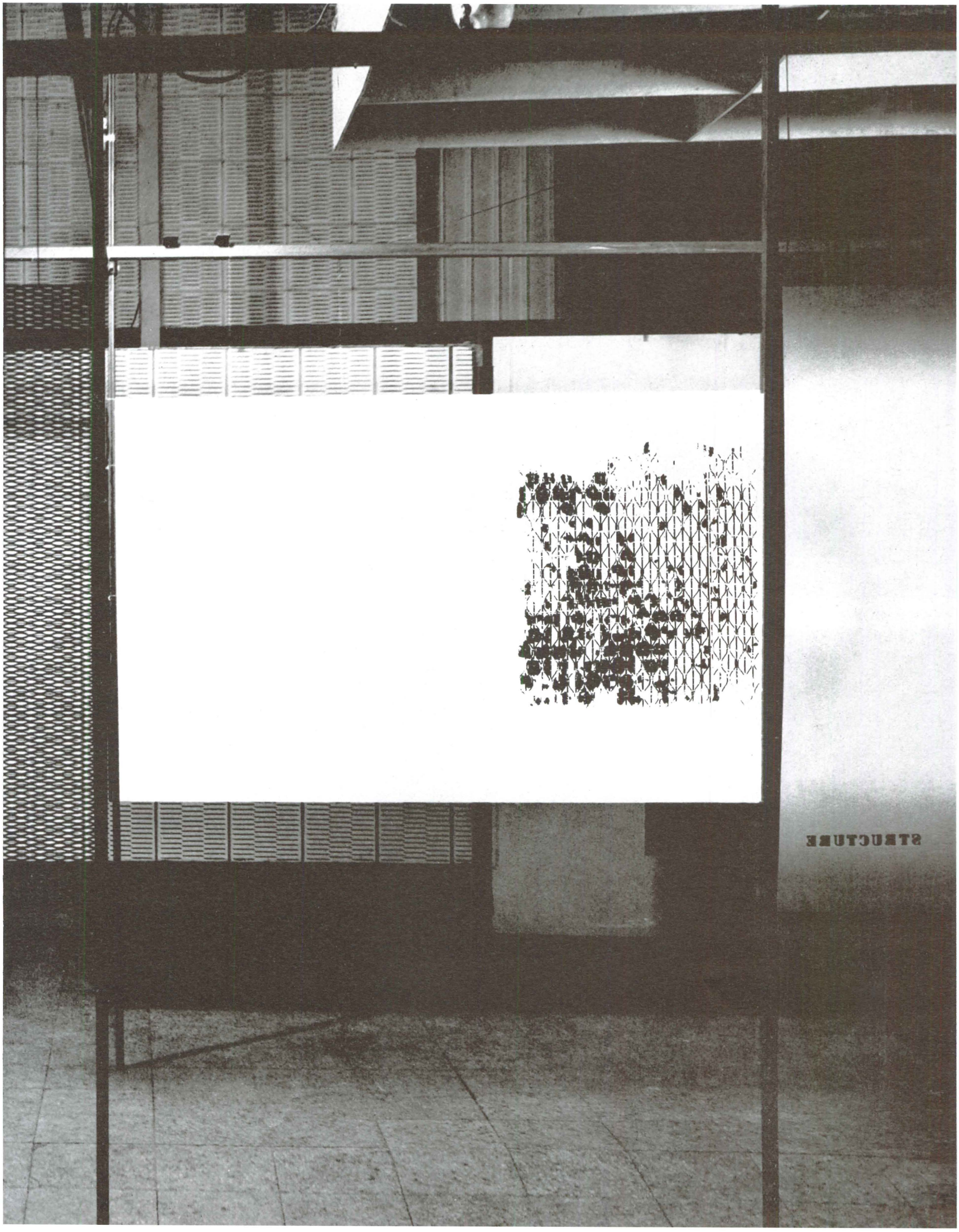
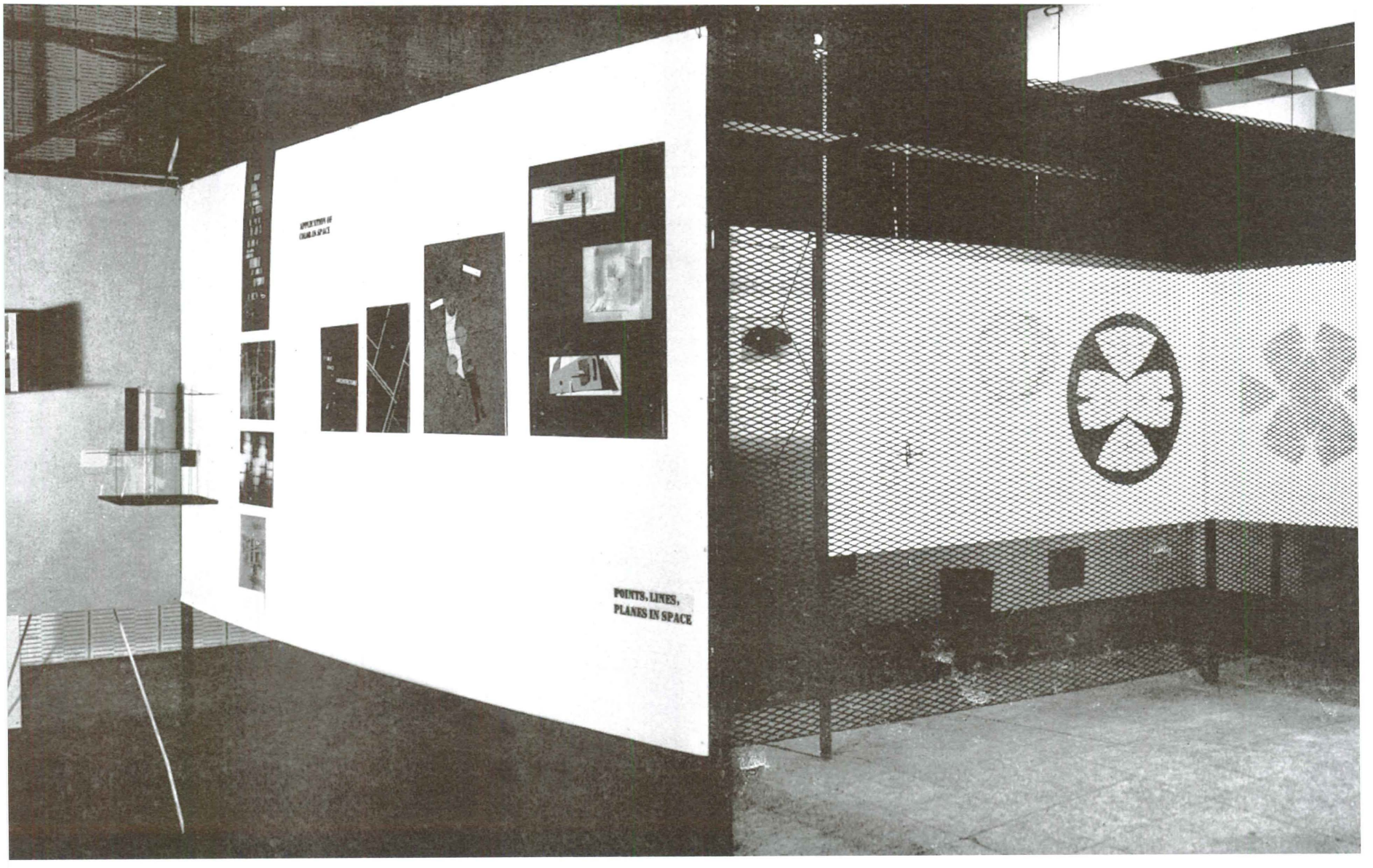
each spring, the institute of design of illinois institute of technology prepares an exhibition and holds open house. the total activities of the school are on display, and the event has become much marked by the public. it draws professional people in many fields, who find insights into new concepts both in design itself and in design education—an educational concept appears in action. at this spring's open house, several thousand visitors were received. by no means were all of them practitioners in design. young people—potential designers—could look into the ramifications of this or that field of design, and in each field they could examine processes as well as results. laymen found a comprehensive display, the range of the designer's world—everything from basic visual exercises to highly technical structural systems. they could enlarge their awareness of the designer's function in society. to the ID student, open house is of unique value. all students participate, and in doing so are placed in collaboration with all fellow students and with the whole faculty—the one complete collaboration of the year. a comprehensive design problem develops in the planning and execution of open house and leads to an integration throughout all levels: student, class, department. here the student now sees his individual efforts and his solutions to class problems become part of a total design pattern. open house at the institute of design is a complete experience for the student. he cleans and paints the school. he plans spaces, traffic-flow, structure. he selects, organizes, then presents materials demonstrating his design education. and he carries on all forms of public relations: contacting press and radio; designing, producing and distributing posters, announcements and invitations; conducting tours and demonstrations. this issue of the magazine arts and architecture



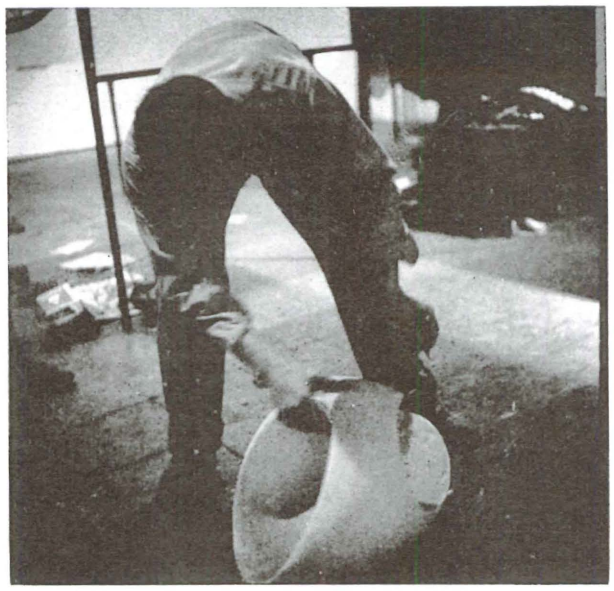


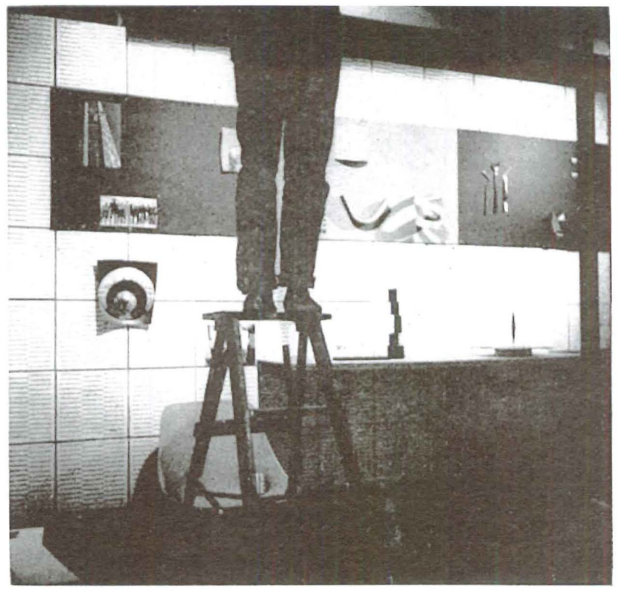

STRUCTURE

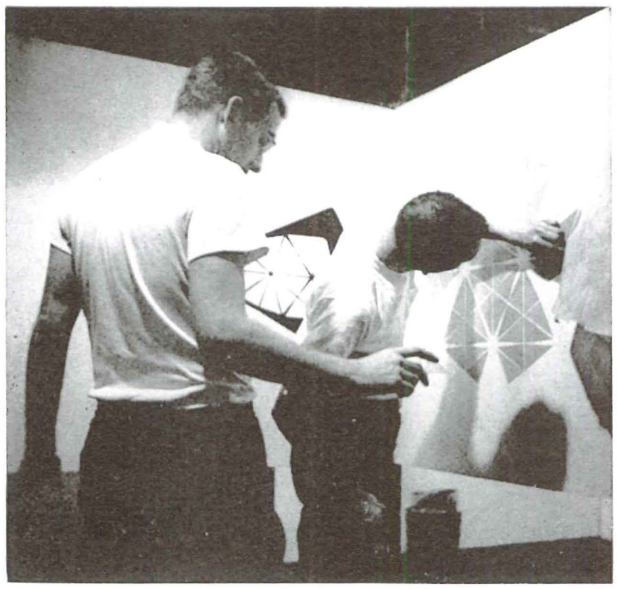
PHOTOS OF SEVERAL OF THE 240 PANELS SHOWING TYPICAL STUDENT WORK IN THE VARIOUS DEPARTMENTS OF THE INSTITUTE OF DESIGN FLEXIBLE EXHIBITION SYSTEM UTILIZING STANDARD UNISTRUT ELEMENT

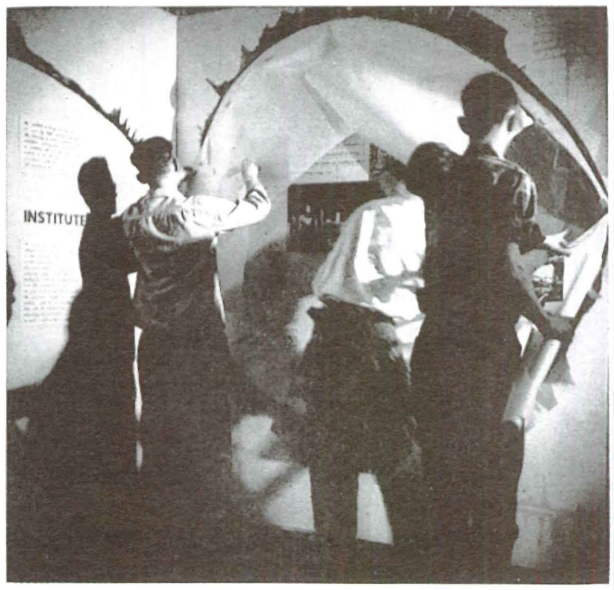


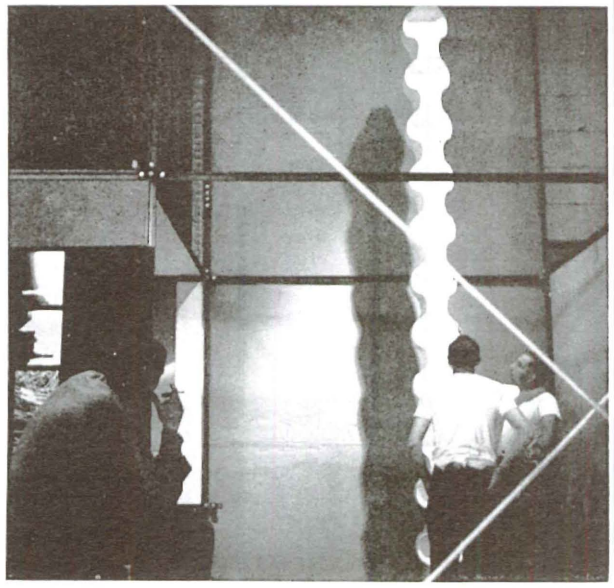
the institute of design trains its students to take their place in society—modern society with its increasing need for order: design. It recognizes the challenge of the time, the social responsibility of the designer. the school operates on the principle that "everyone is creative" and that his emotional and intellectual endowments can be channelled into creative activity by the educational process. the process and approach remain paramount, because a creative designer can only fulfill his function in the various exigencies of life if he has learned to think in terms of industrial potential and human need. by learning how to handle his materials and his tools, their possibilities and their limitations, the student is better equipped to execute the finished product. the simple wire joint, made almost playfully in the foundation course assumes its wider ramification when calculated with exactitude for new immense structures in advanced building research. becoming familiar with his hand as the most basic creative tool, he begins to use the simple hand-tool extension, slowly progressing to the utilization of the machine. his sensitivity—often stifled by a passive education which stresses docility and memorization—is revitalized by the active process of working with tools and materials. in addition, through related study in the sciences and humanities, the student is helped to achieve a synthesis of art, science and technology. every entering student is enrolled in the foundation course (three semesters) where emphasis is placed upon developing unrealized capacities through a series of creative exercises. students frequently flounder in amazed bewilderment through their first few weeks. many of them complain vociferously that they know perfectly well what they want to do, but find themselves too awkward and unskilled to do it. many others, with better technological training, dexterously go to work only to discover that they are not grasping the concepts behind the assignments. after a few weeks of trial and error, critiques and inter-student discussions, the novice begins to perceive his own individual approach to the problem. at the end of three semesters, after introductory work in the various departments, he is allowed to concentrate in one of the four sections of the school: visual communication, photography, product design, shelter design and building research. if he enrolls in visual communication he will find himself confronted at once with the broad aspect of his problem: the artistic, social and economic implications of communication through vision. the student sets about solutions by developing his ideas in terms of specific techniques in typography, graphic reproduction, life drawing, film, package design, advertising, display, etc. if he goes into the photography section, the student will begin by exploring the action of light on photo-sensitive materials without the camera (the photogram). he progresses from this to translating the action of light on objects with the camera, working largely with abstract photography in the beginning to teach himself the basic principles of form in the medium. he uses his camera experimentally to develop his own sensitivity to light and shade, reflection and refraction, density and transparency, surface and texture, observation and selection. he works with moving pictures in black and white and in color, or combines still and motion photography imaginatively with other media of visual design to create significant communication. a major in product design starts his work by studying and designing typical equipment for living. he is constantly encouraged to cultivate his own inventiveness for the development of objects best suited to the needs of the individual and the community. he makes working drawings

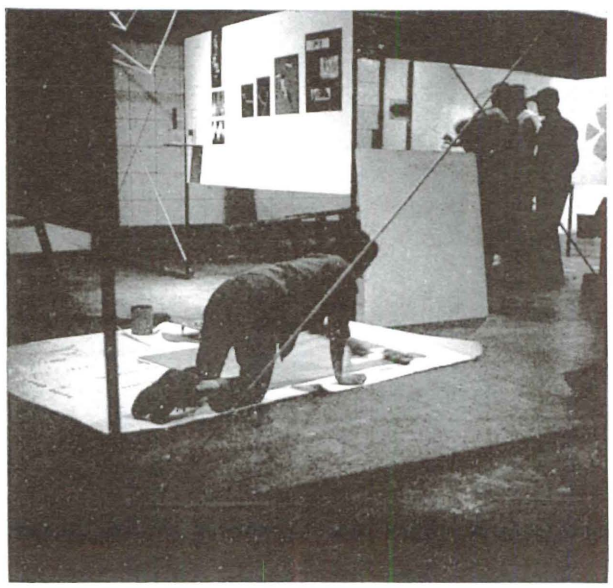




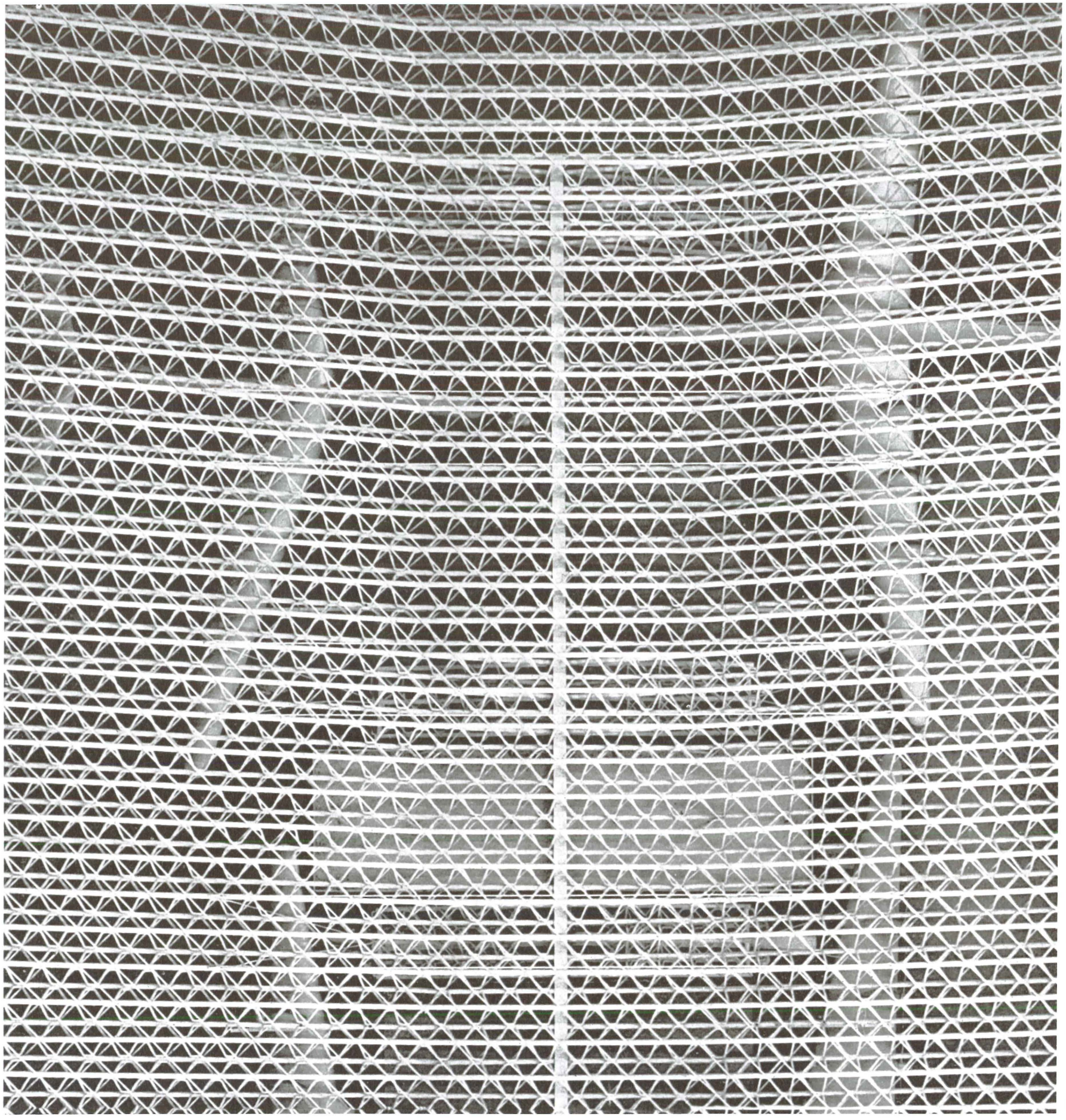








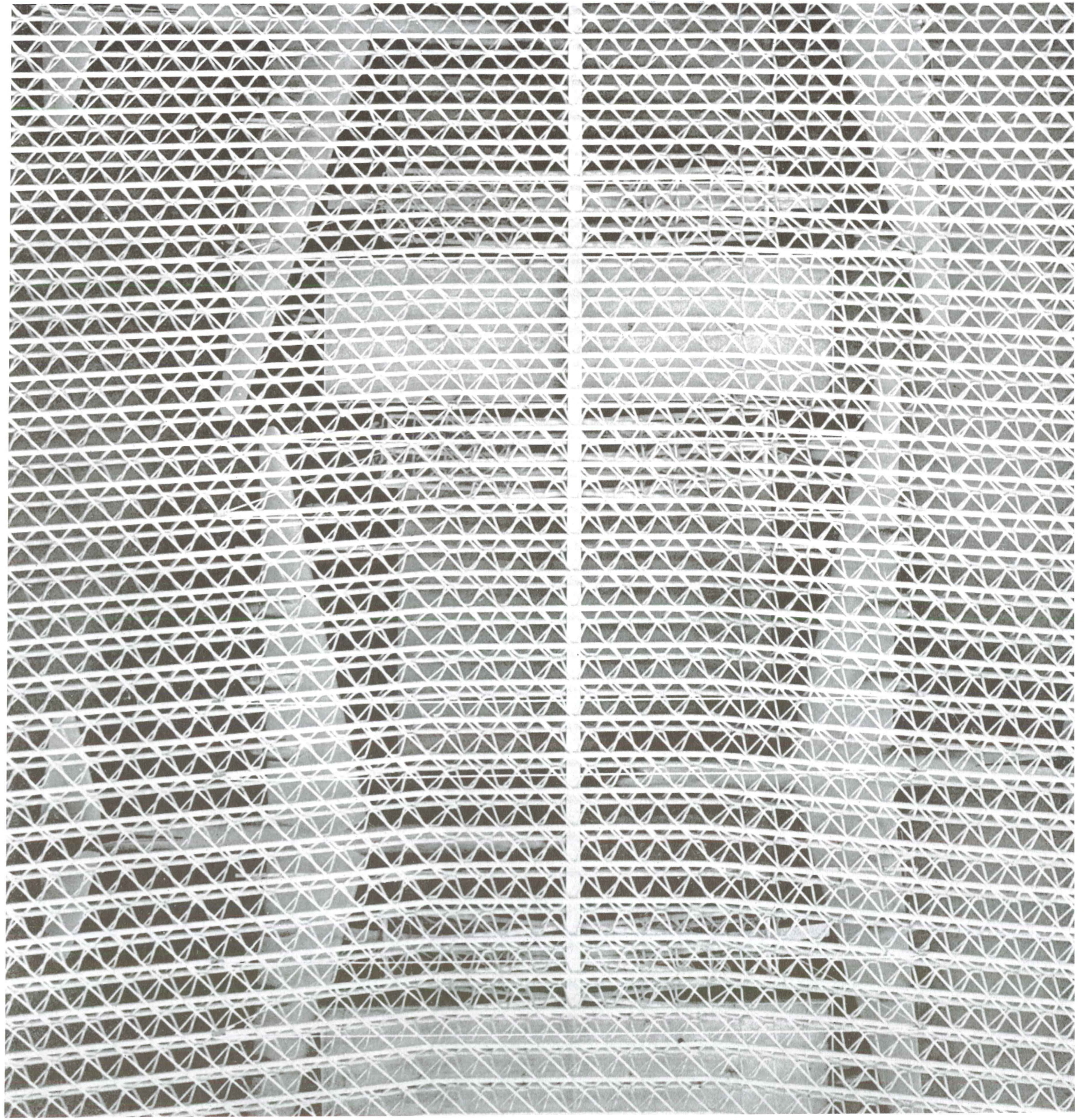
and models, studies techniques of mass production, experiments with a large variety of materials and processes. he seeks solutions for the practical problems of human needs from eating utensils to furniture to sanitation systems. scientific, technological, economic and human requirements are all related to the planning and creation of useful products. the planned relationships of products within a developing utility pattern is constantly stressed. social need within the industrialized economy is also a prime emphasis in the shelter design and building research section. this demands understanding and constructive collaboration between the designer, scientist, engineer and planner. the student's program is directed toward the development of materials, methods and concepts based on industrialized building construction. he studies construction; goes on to investigate environment and illumination control, acoustics, hygiene for physical and mental well-being. beginning with the simplest means and requirements, he progresses to the design of elements and components in a contemporary structure based on the most advanced industrial potential. when the student graduates from the school he is prepared to work as an independent creative designer. he has learned to penetrate basic needs rather than to imitate or blindly extend accepted patterns. he thinks in terms of the total complex and its relationships. he is intimate with the industrial potential or the range of process of his design area. he is a designer potentially able to assist in the endless evolution of improved environmental processes. the institute of design was founded by lazlo moholy-nagy in 1937 as the new bauhaus, an independent school. in 1949 the institute of design became a department of illinois institute of technology and has benefitted from the wide resources of this leading technological institution. at the institute of design a continuous series of exhibitions, culminating with the spring open house, serves as an integrating factor by showing the most recent work of students, faculty and alumni, and enables visitors to observe developments in the school. painting and sculpture are not studied as fine arts at the institute of design; however, the importance of these and other arts are emphasized as a means of personal expression and the development of sensory acuity. there are of course the usual number of internecine disputes and outside criticisms over the ultimate goals of the institute's program. there are those who complain that the school is a new academy, training designers to follow modern absolutes with sheep-like obedience, and others who insist as vigorously that the program is too free, that the student easily acquires a notion that "anything goes." most of the students and faculty members have an extremely healthy attitude toward these disagreements; they

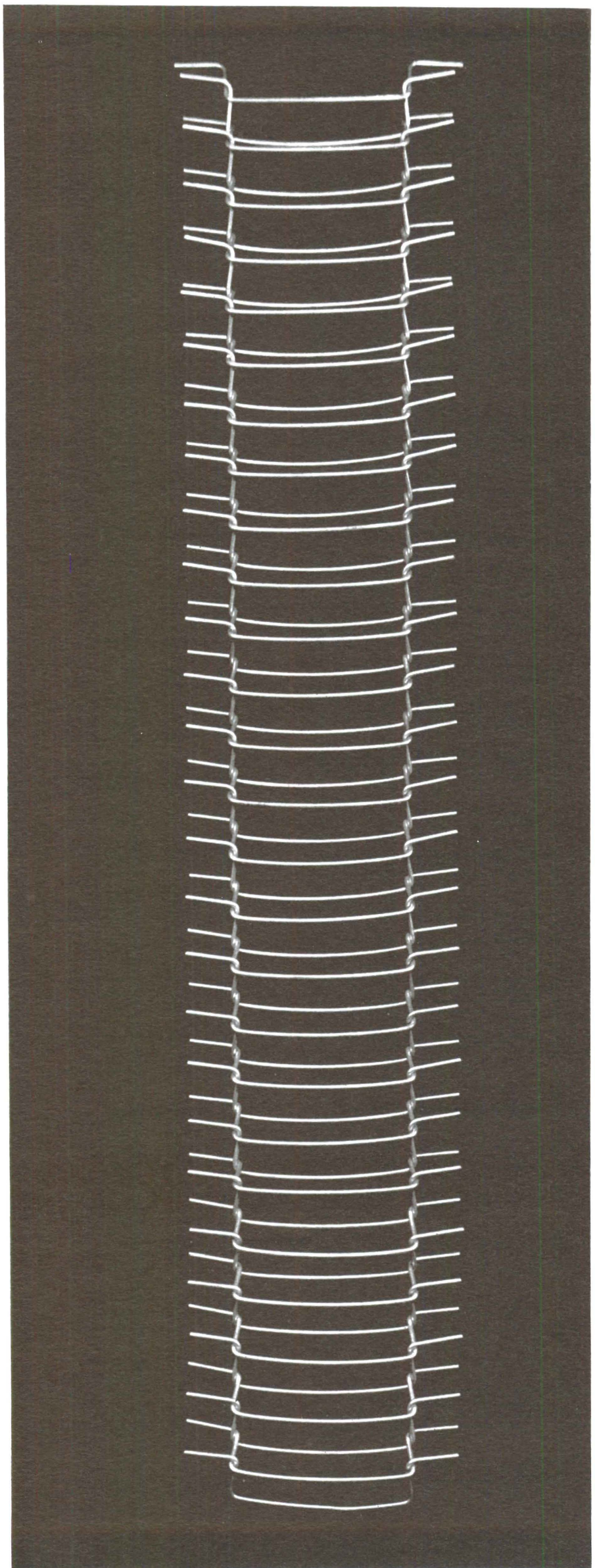


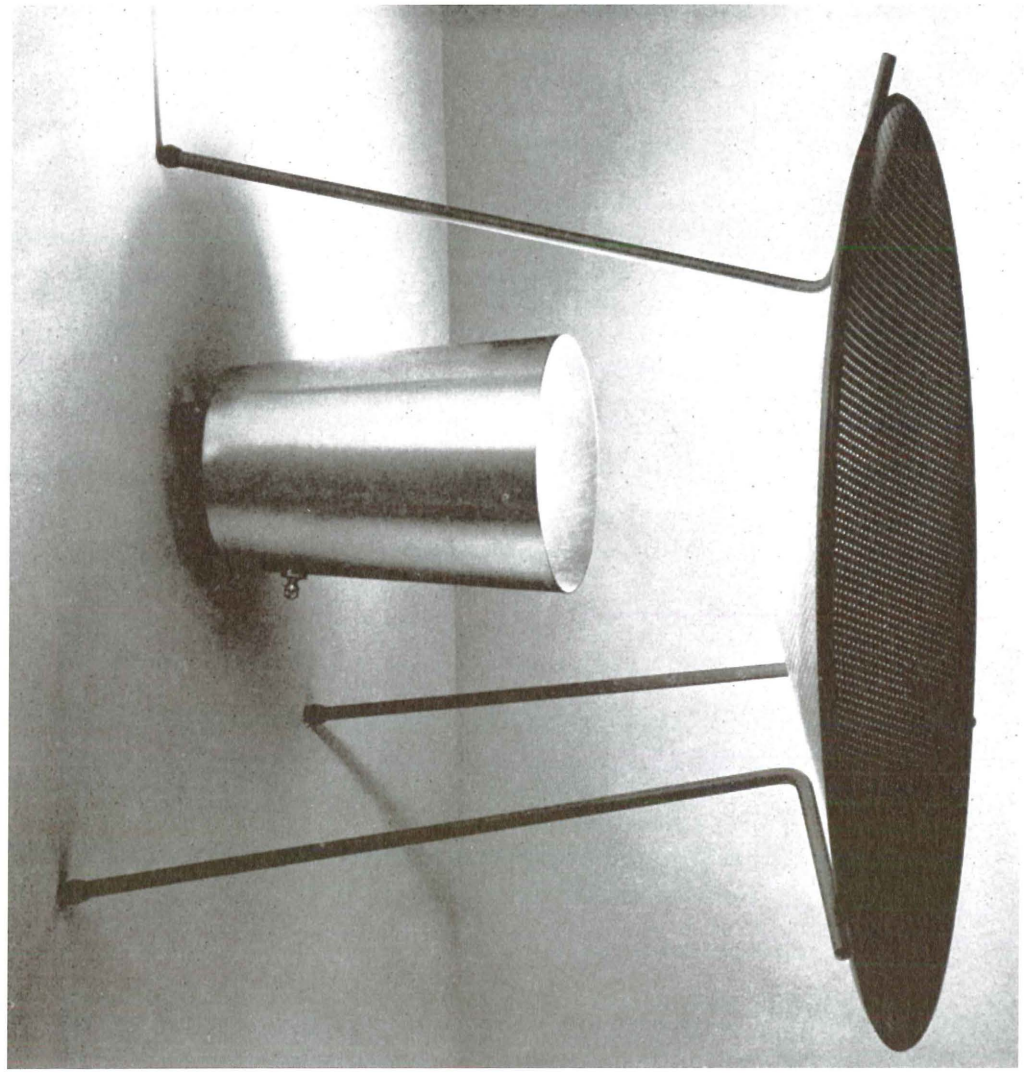
THIS PHOTOGRAPH TAKEN LOOKING DOWNWARD ON THE CANTILEVERED AIRPLANE HANGAR DESIGNED AND DEVELOPED BY THE ADVANCED BUILDING RESEARCH SECTION, DESIGNED FOR INDUSTRIAL PRODUCTION. THIS STRUCTURE REPRESENTS AN IMPORTANT STEP IN PREFABRICATION PROCESSES. THIS DEVELOPMENT IS ONE OF MANY SPONSORED PROJECTS PRESENTLY CARRIED ON AT THE INSTITUTE OF DESIGN IN CHICAGO

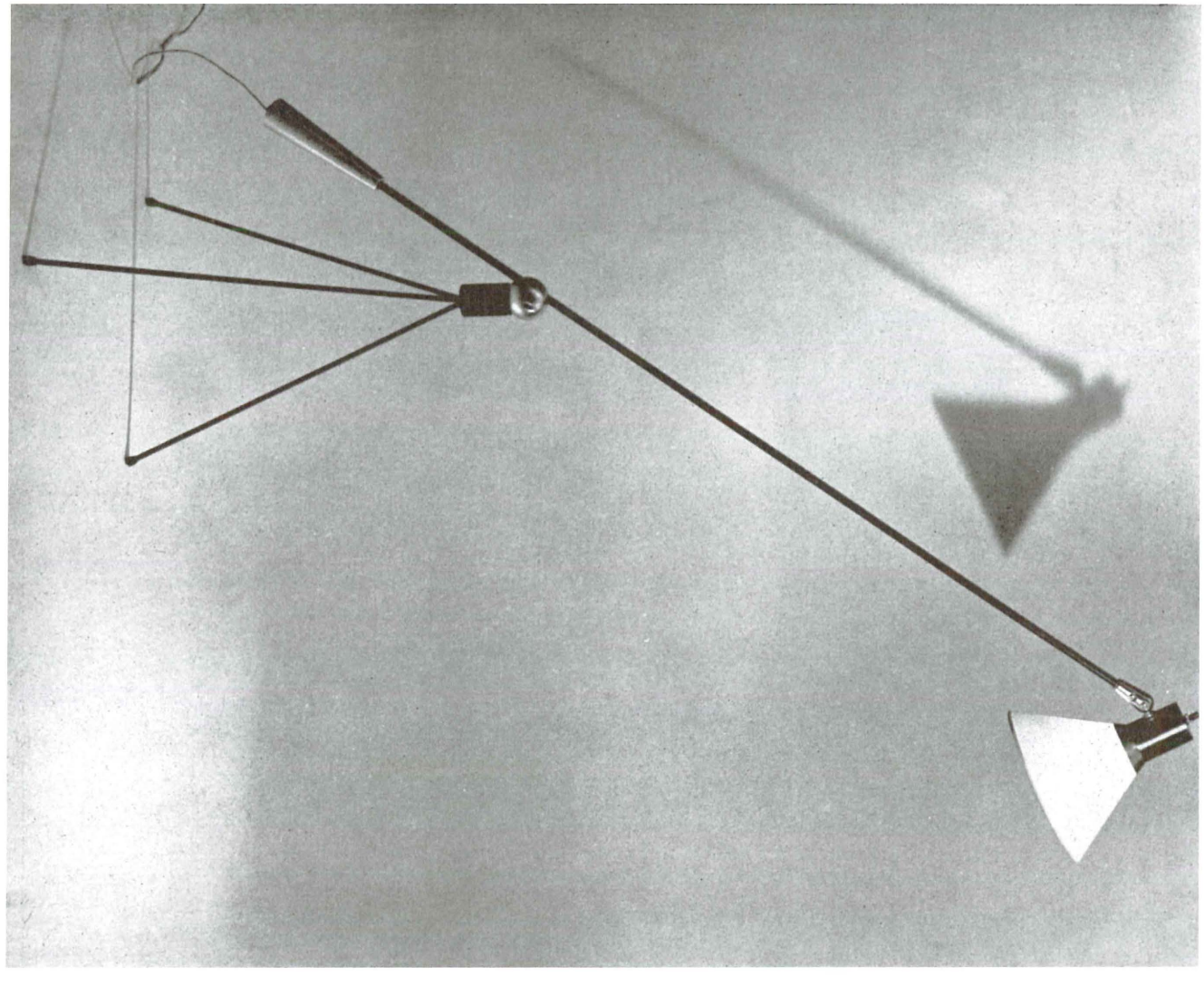
tends to stimulate student growth. in this atmosphere the school has grown into a mid-western meeting-place for designers, artists and creative people of all kinds and from all countries. it is often the first stop for any traveler who is concerned or curious about the present and future of modern art, design and technology. the institute of design is peculiarly distinguished by its diverse student body, which has come from a wide variety of national, social and educational backgrounds. the faculty is composed of men and women who are outstanding figures in many fields—in architecture, painting, printmaking, typography, product design, photography, art history, etc. most of them have discovered not only the commonplace that their own accomplishments have aided them in teaching, but conversely that association with the school and its vital educational issues has tended strongly to develop their talents and increase their professional productivity. principles and ideas developed in sponsored research projects of the institute of design assist industry in the solution of many perplexing design problems. graduate research has ranged from packaging developments to building construction systems. leading government agencies concerned with building have recognized the advanced building research section of the school as a valuable instrument for the development of new structures. here new industrialized building principles are formulated to keep in step with the changing technological pattern. a new graduate program in art education has been developed with the purpose of disseminating the school's educational viewpoints. It is based on the recognition that creativity on a sensory level is a universal endowment and a biological need. the student who is a part of the teacher training program takes the inventive work of the foundation course and participates in seminars on a theoretical and philosophical level to enlarge and give greater significance to this training and to become critically aware of the dynamic tradition in the arts and the significance of creative activity for mental growth. the beliefs and results evolved at the institute of design for the last fifteen years and introduced into society against, at times, vigorous resistance, have now been largely accepted into the existing design and educational patterns. unfortunately, by misunderstanding many of these principles, commercial designers have given birth to monstrosities of pseudo-modern objects and art schools have copied "hand sculpture" and "mobile" without comprehending the process of evolvement. the object of the school is to develop a designer able to produce implements which will reward society with an ever-increasing quality of performance and constantly decreasing effort of production. this means a task of constant critical evaluation of each design effort.

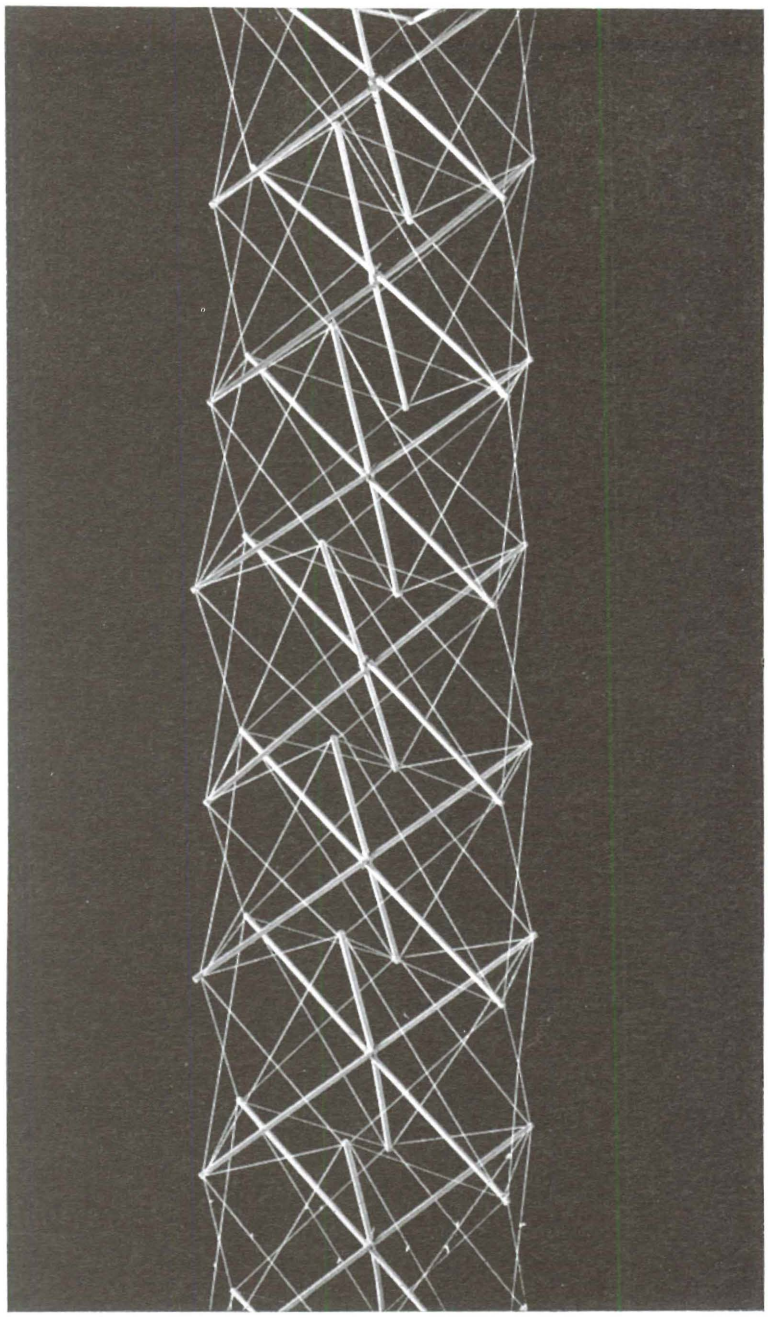
RAL PATTERN EXERTING UTMOST ENERGY TOWARD ELIMINATION OF ARTIFICE AND SUPERFICE. THE INSTITUTE PURSUES A PROGRAM STIMULATING INTEGRITY AND SOCIAL CONSCIENCE IN THE FIELD OF DESIGN



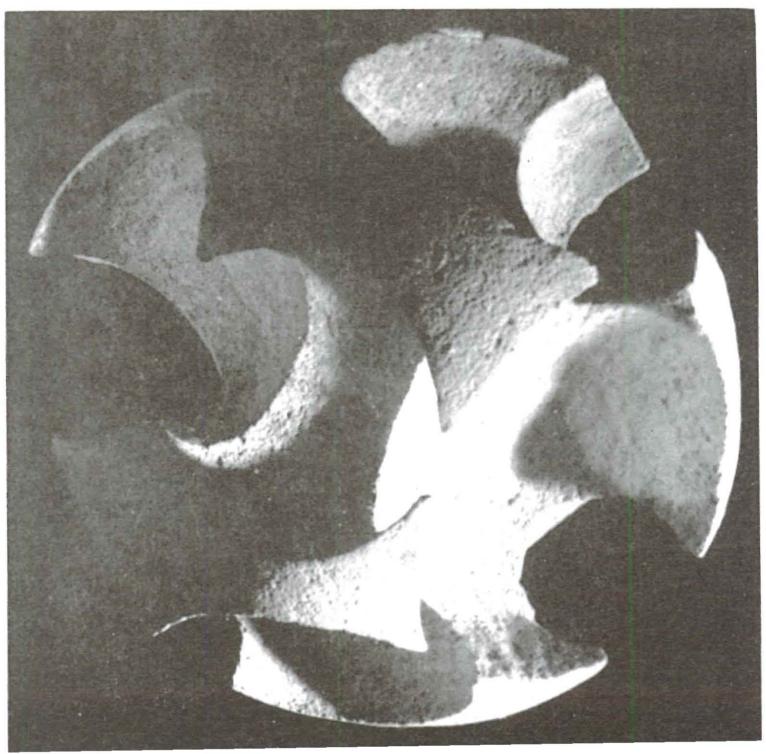




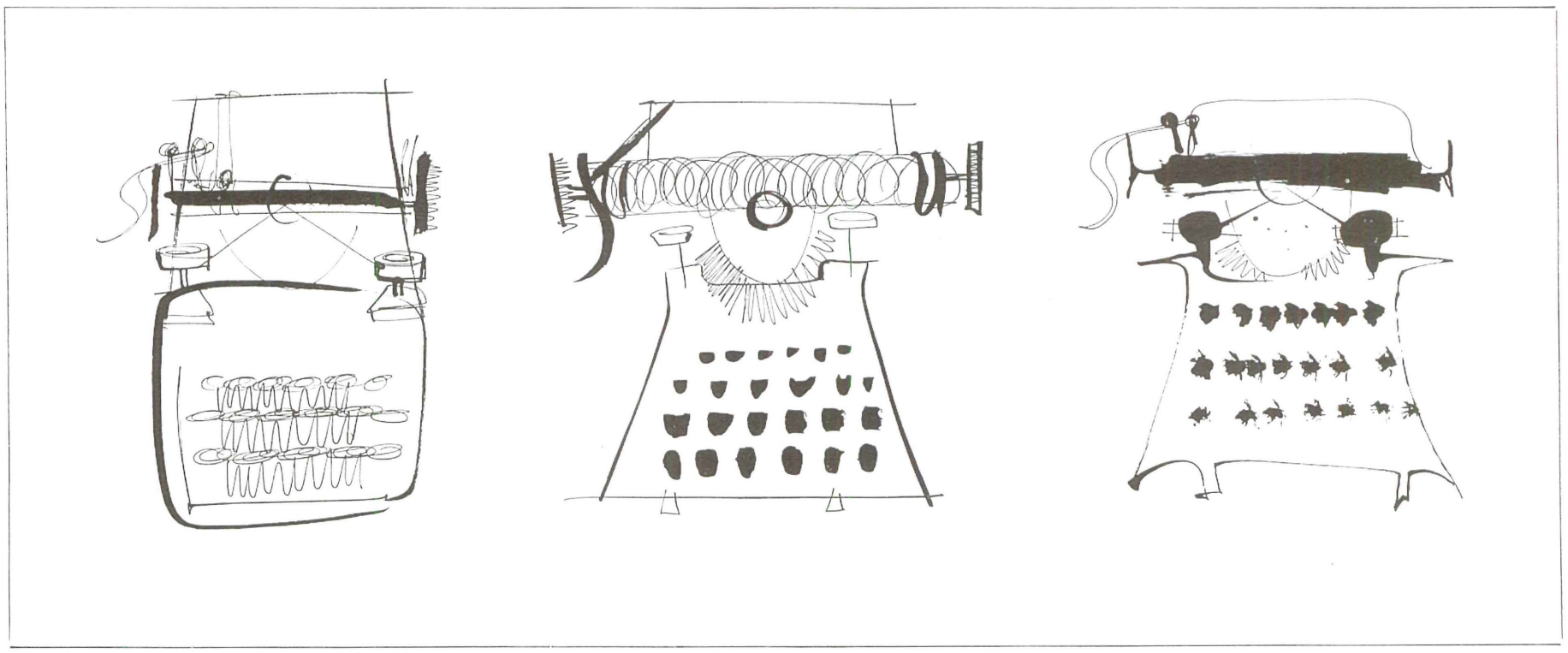


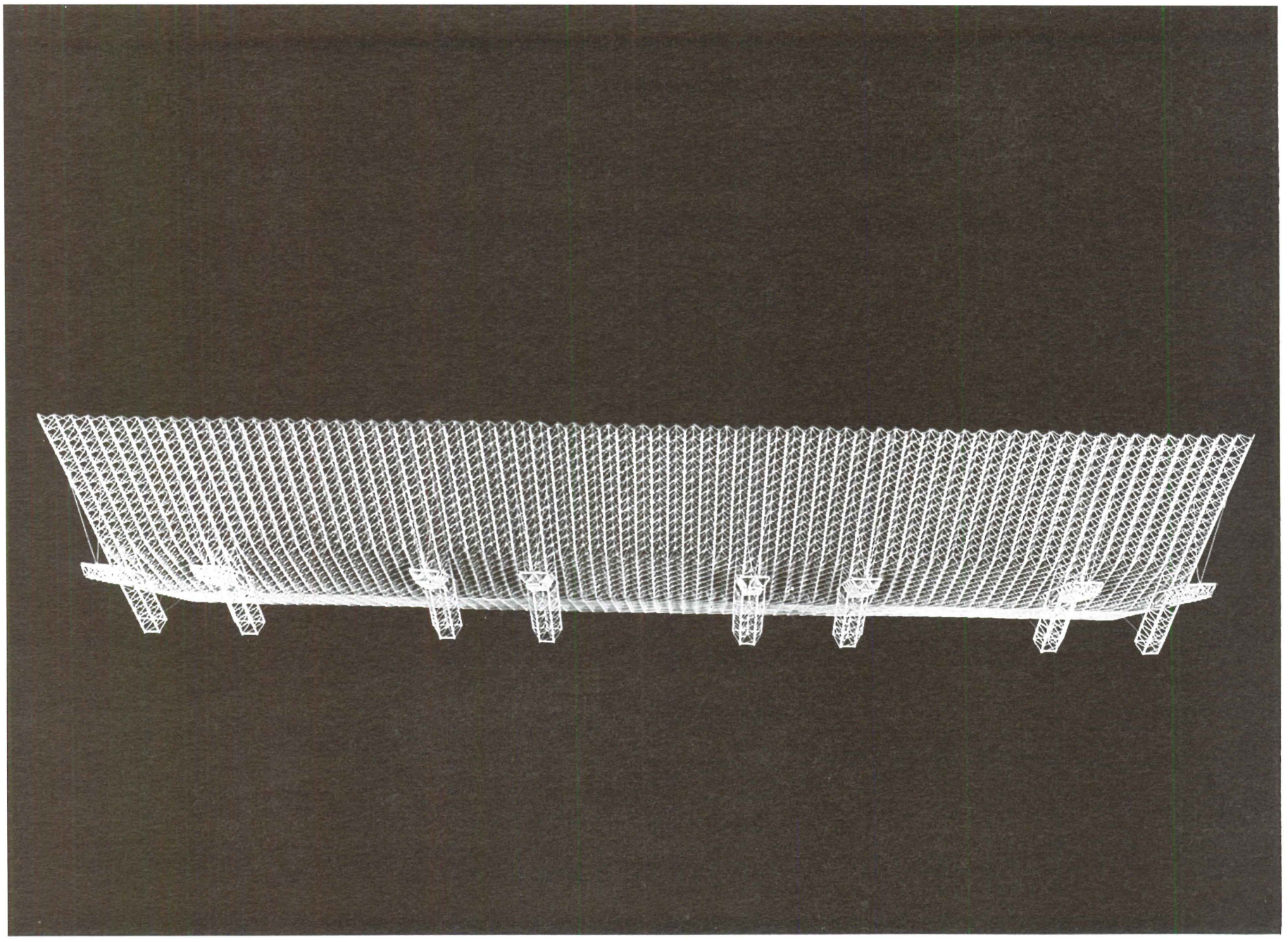


PRODUCT DESIGN SECTION: CHAIR | FOUNDATION COURSE: EXPERIMENTAL TENSION-COMPRESSION STRUCTURE, STEEL SCULPTURE, CLAY SCULPTURE

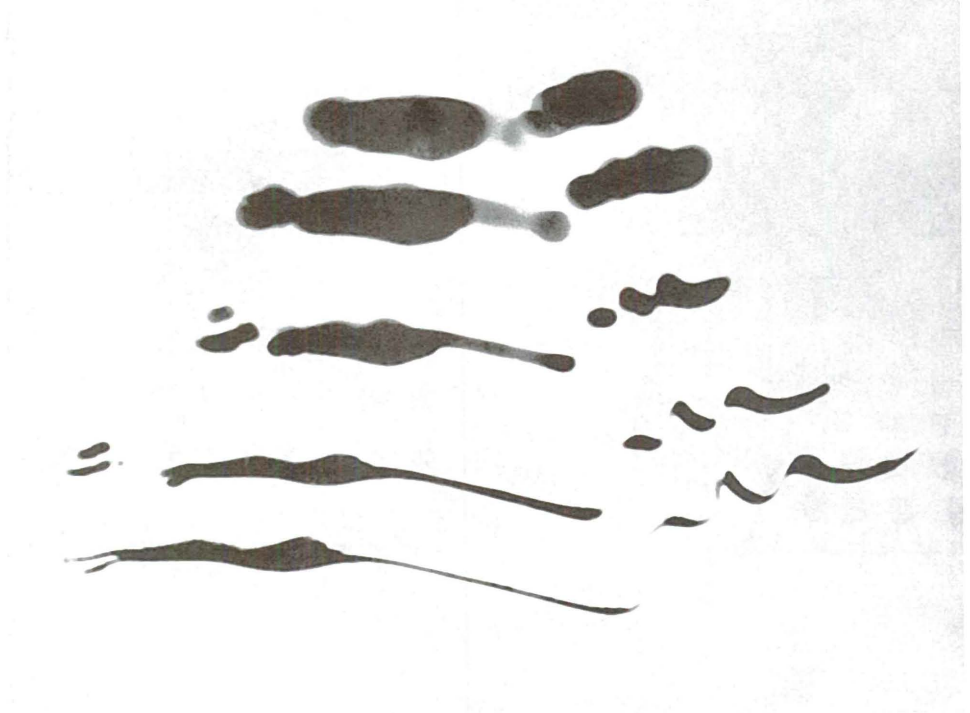


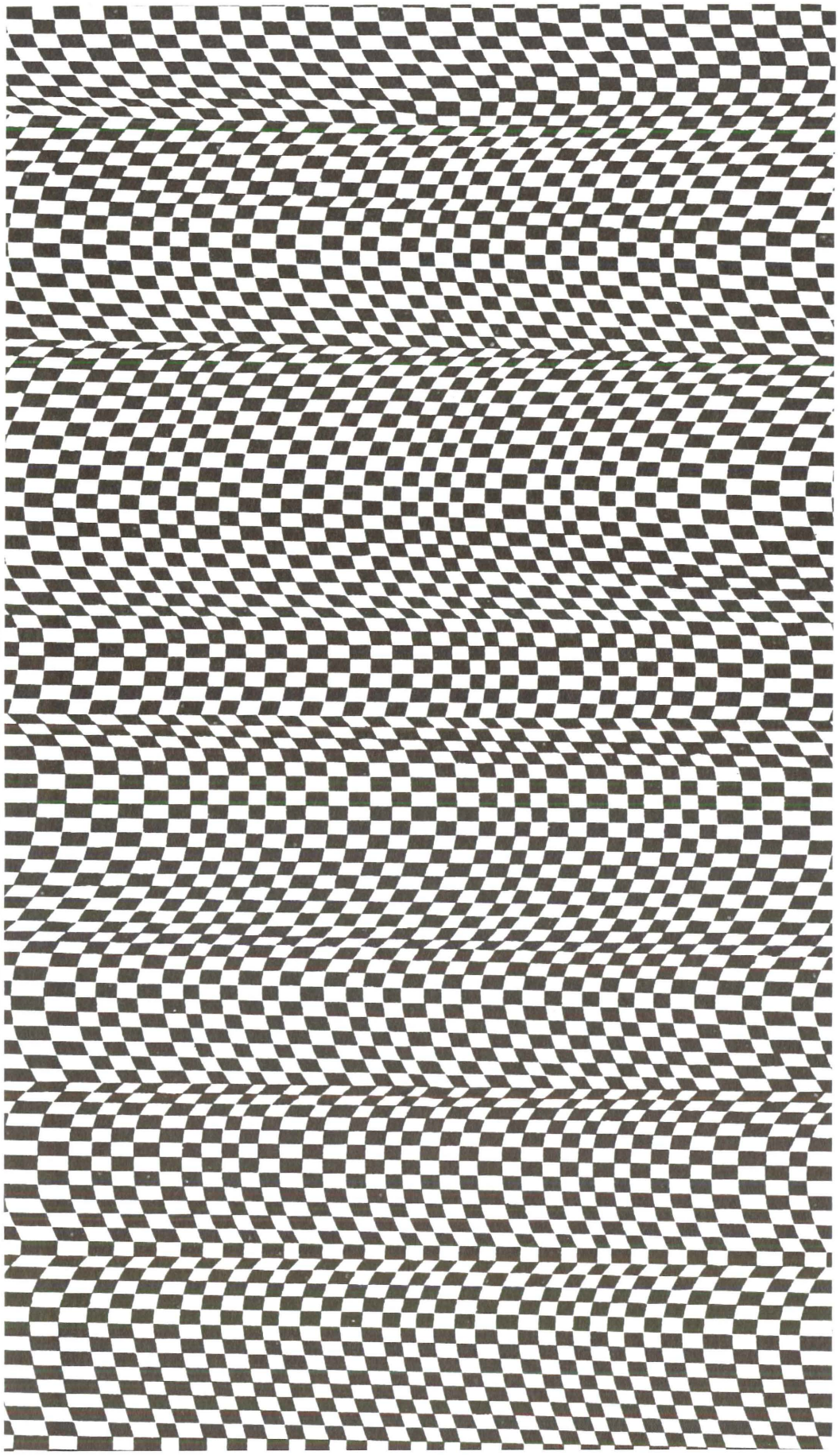
VISUAL DESIGN SECTION: SKETCH PROGRESSION

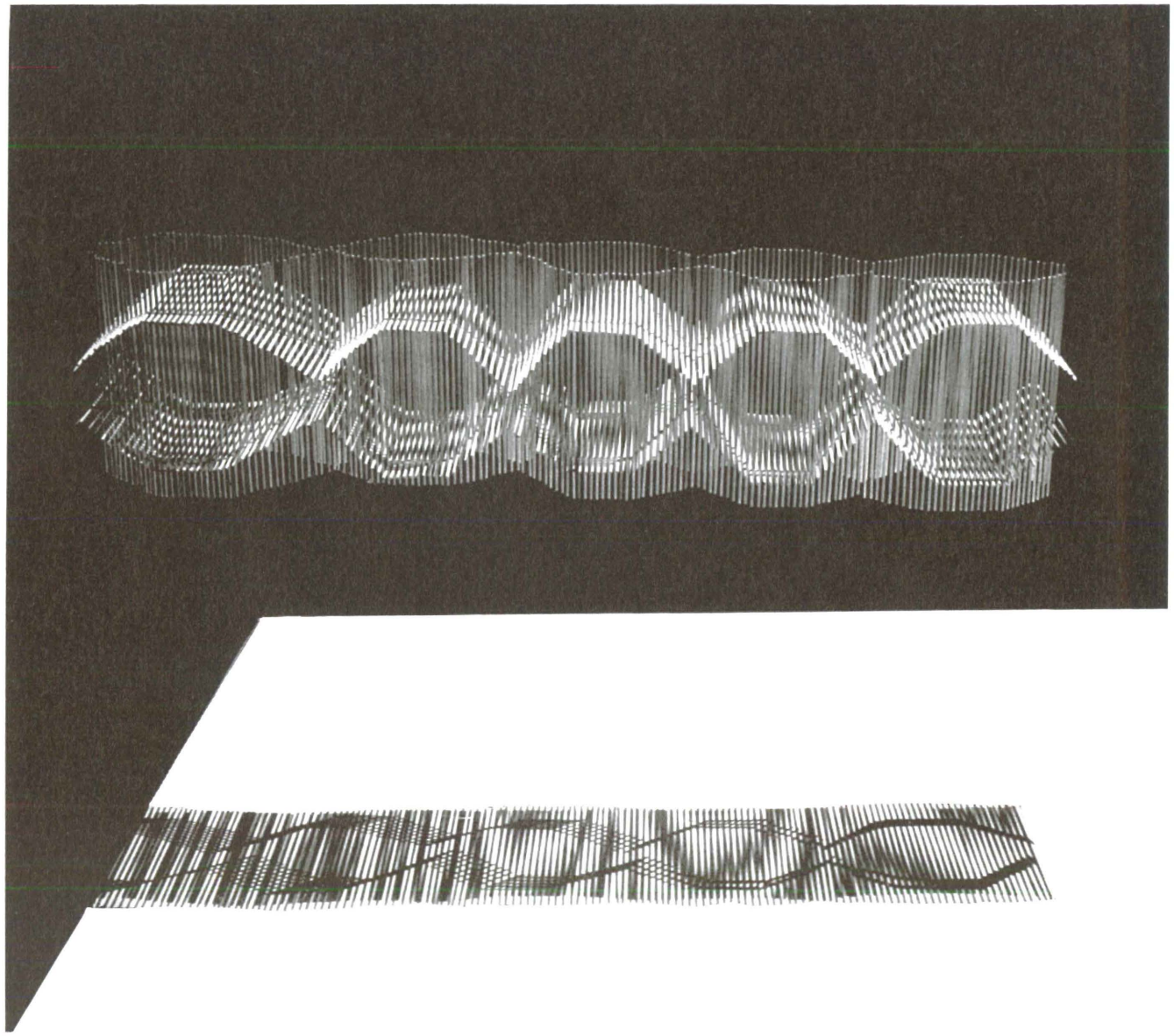


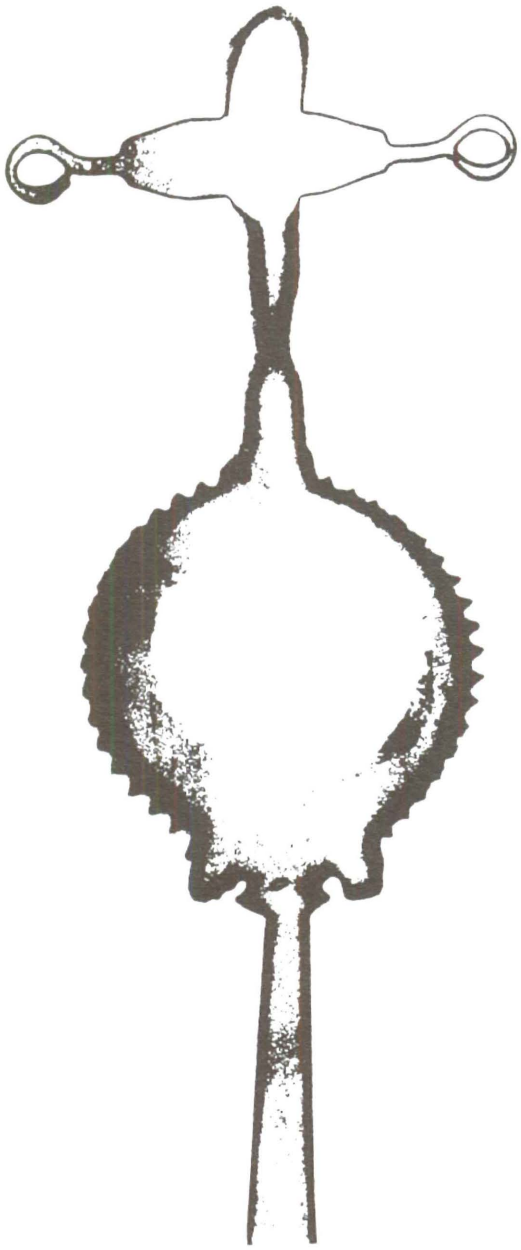


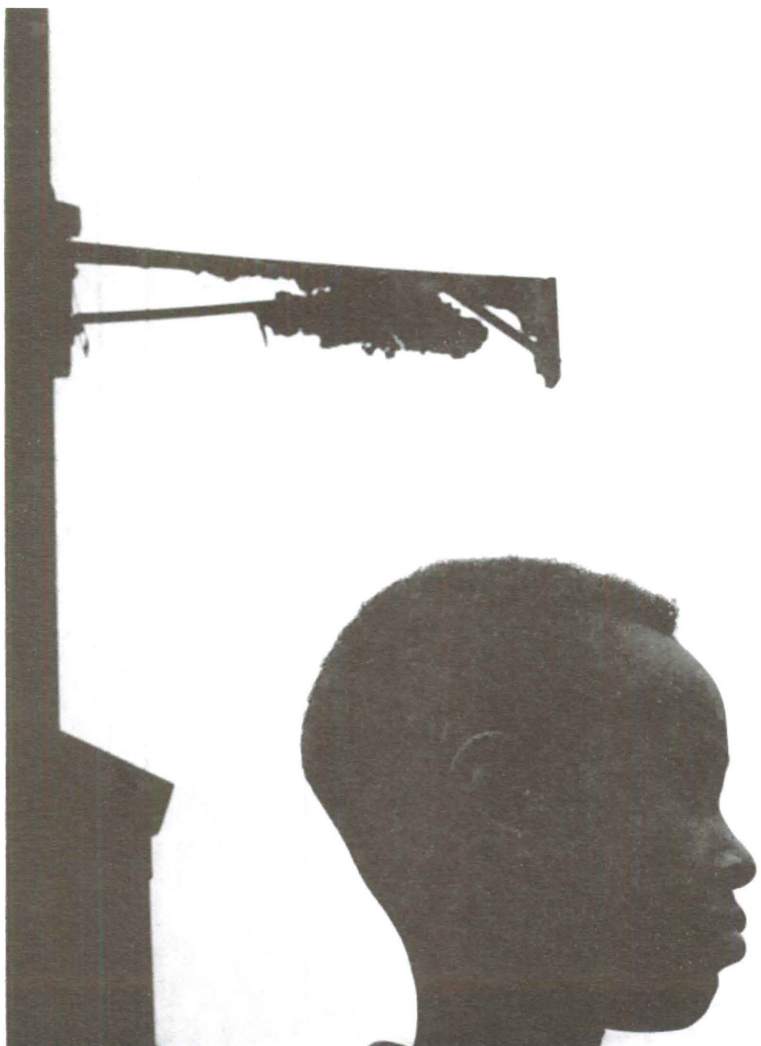
ADVANCED BUILDING RESEARCH: CANTILEVERED AIRPLANE HANGAR | FOUNDATION COURSE DOWEL SCULPTURE, UNDULATED SURFACE | PHOTOGRAPHY SECTION: PHOTOGRAPH



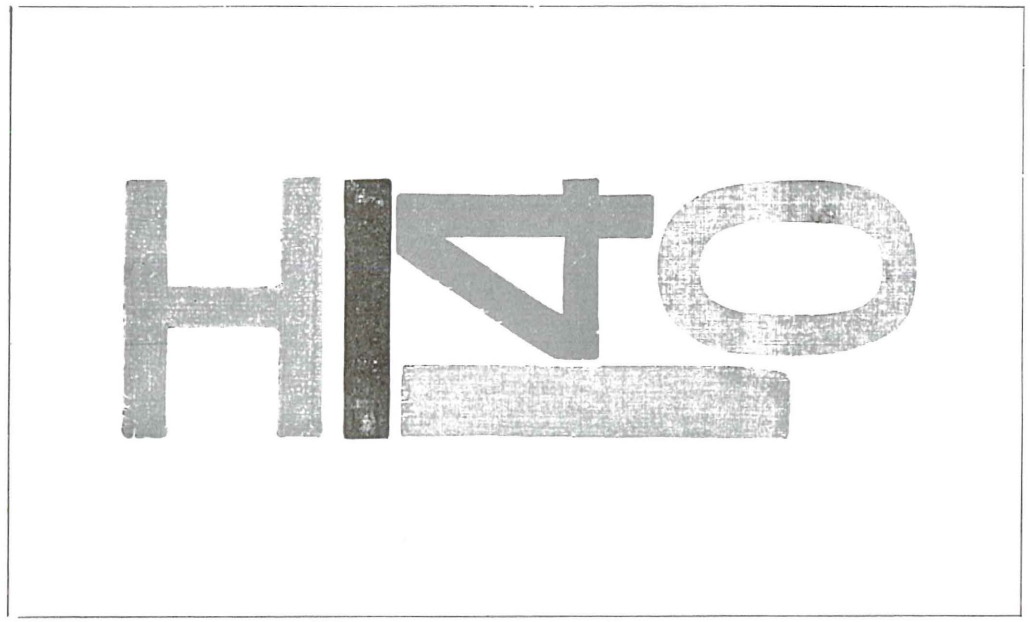


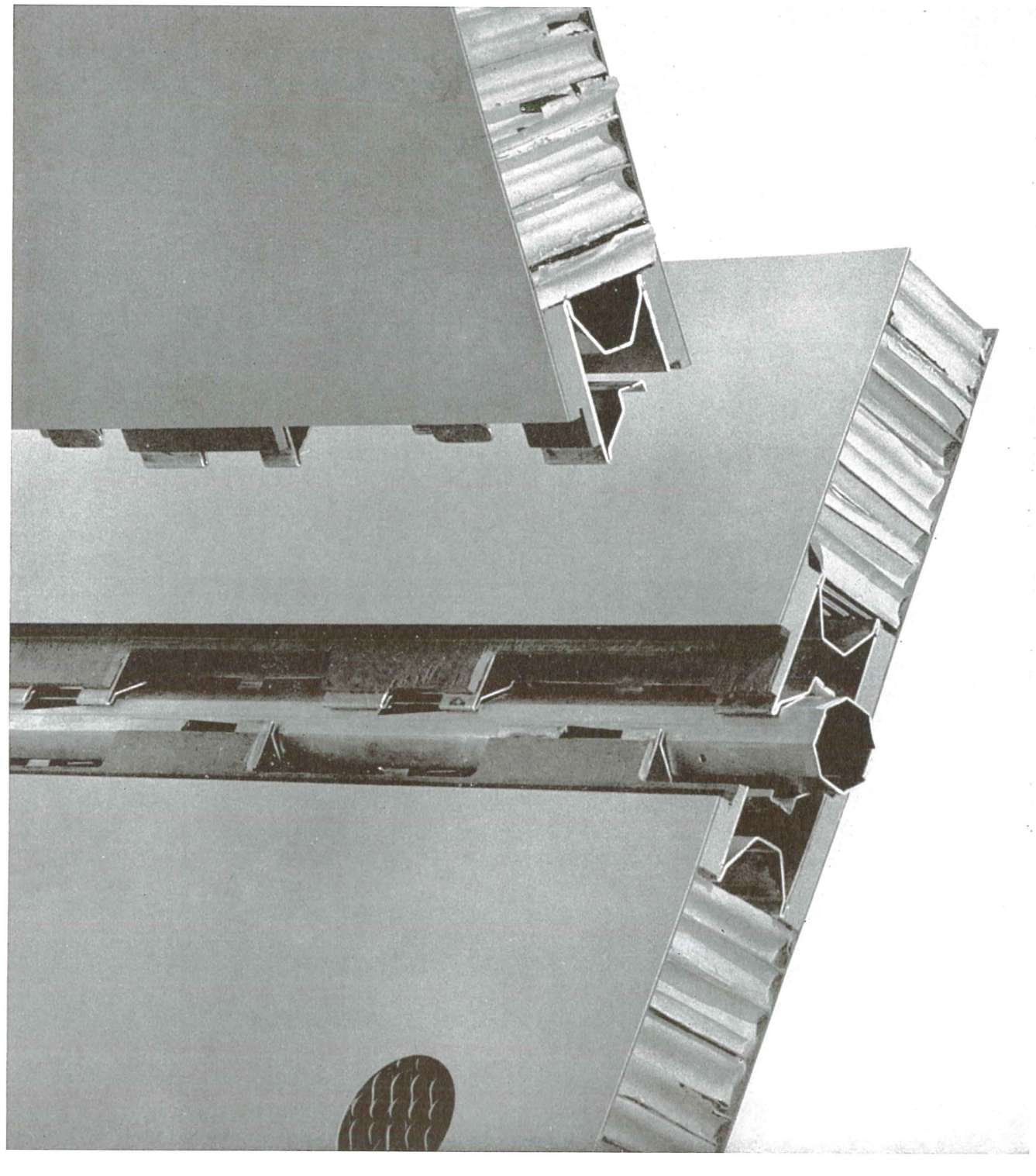


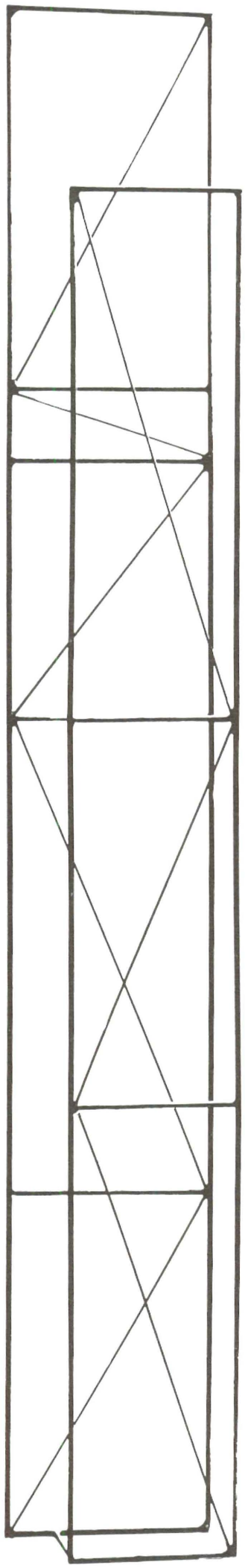


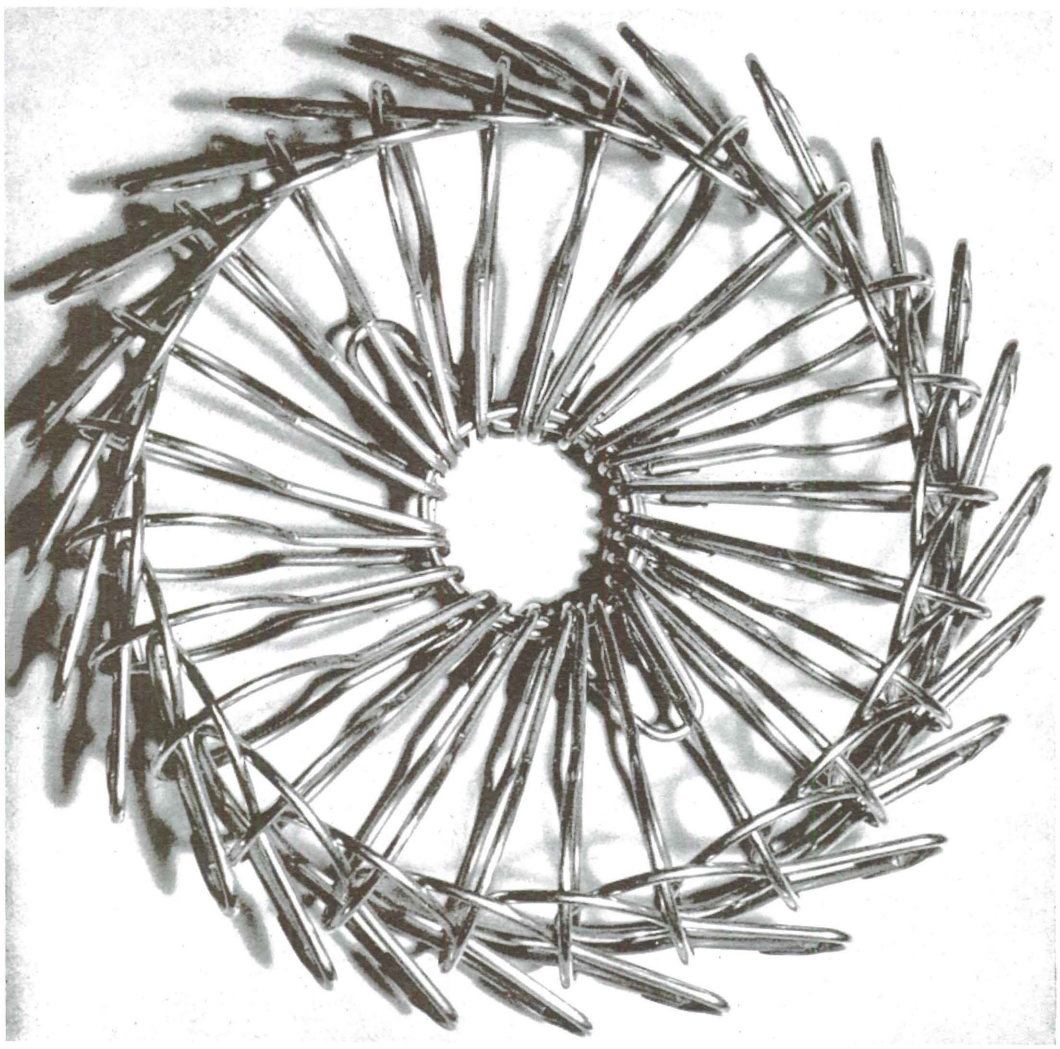


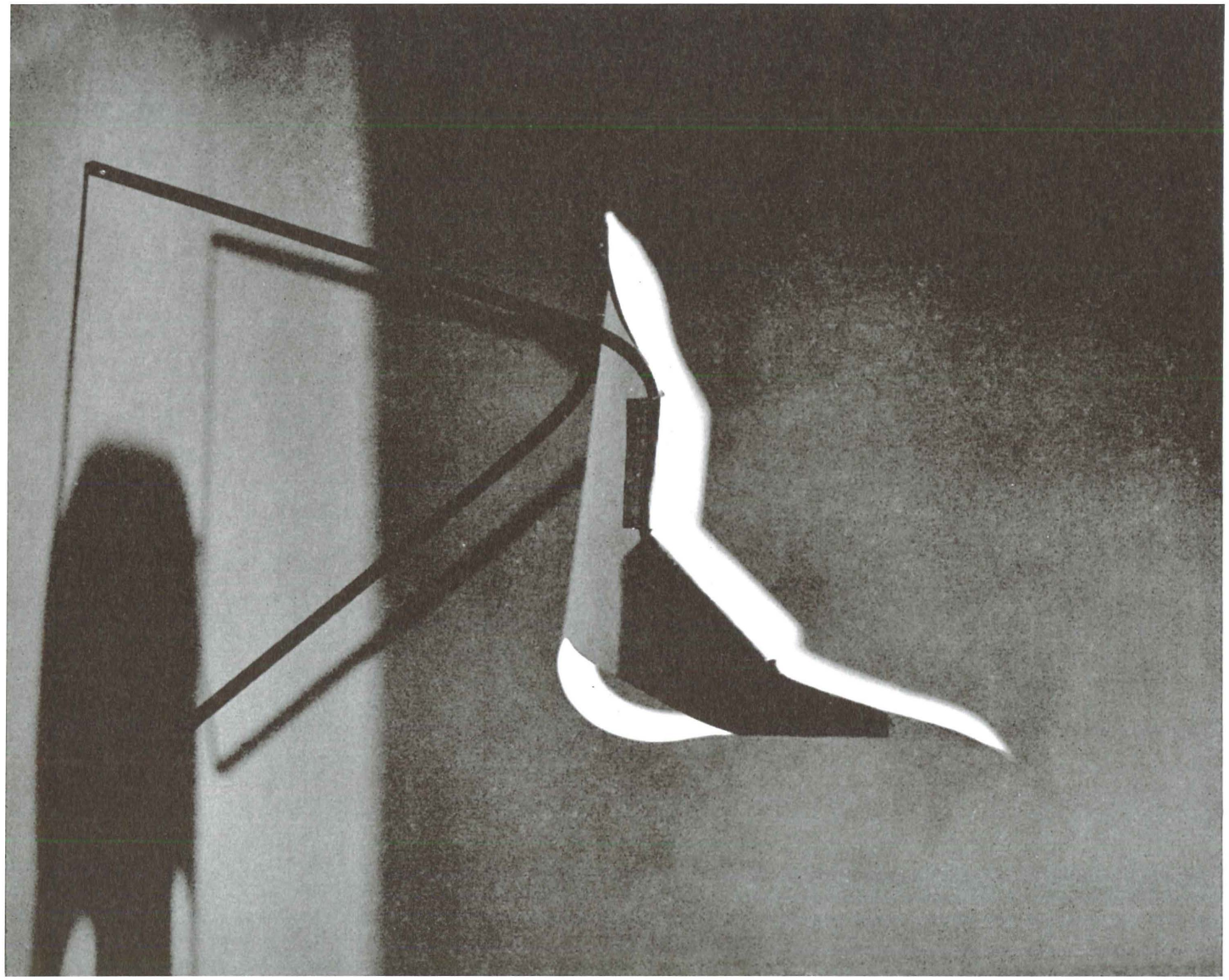
PHOTOGRAPHY SECTION: DOCUMENTARY PHOTOGRAPH, EXPERIMENTAL PHOTOGRAPH (EGG BEATER) | VISUAL DESIGN SECTION: MONOPRINT EXPERIENCE, TYPE EXERCISE | SHELTER DESIGN SECTION: JOINT FOR PREFABRICATED PANEL SYSTEM

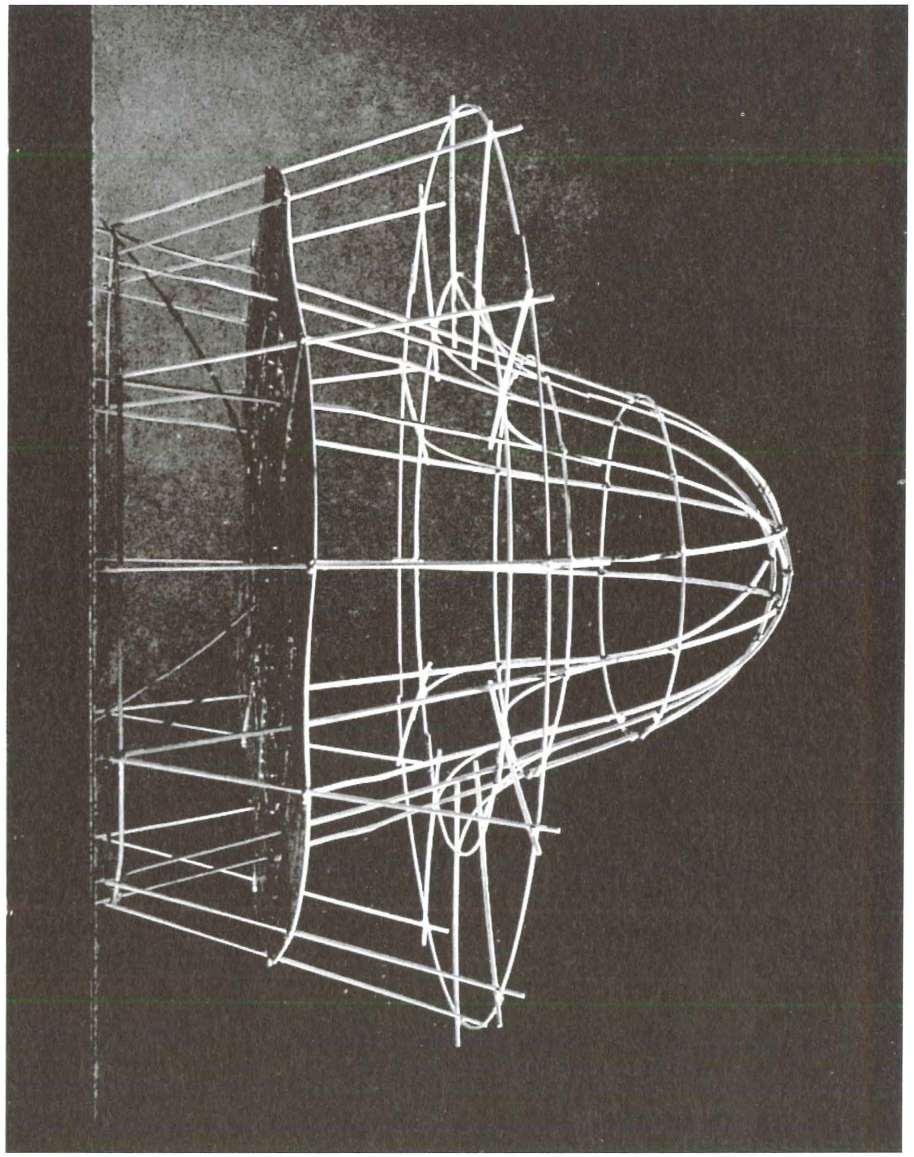












FOUNDATION COURSE: CONSTRUCTION OF FOUND OBJECTS, WIRE SPACE MODULATOR | SHELTER DESIGN SECTION: PRIMITIVE SHELTER EXERCISE | PRODUCT DESIGN SECTION: EXPERIMENTAL CHAIR UTILIZING IMPREGNATED PAPER SHELL

PRODUCTS merit specified for the new Case Study House

DESIGNED FOR THE MAGAZINE ARTS AND ARCHITECTURE BY CRAIG ELLWOOD

The following is a list of those materials which have been specified by the designer for the magazine's new Case Study House, representing a careful selection of products on the basis of quality, design, and general usefulness. They have been selected from among many good products as the best suited to a specific purpose, or at least best suited to the use to which this individual designer intends to put them. They are, therefore, (within the meaning of this program) Merit Specified. Other specifications will be added as the project develops.

PLUGMOLD.—A metal molding wired with outlets correctly located and as closely spaced as desired. Installed around each room, Plugmold becomes part of the baseboard or trim and can be unobtrusively painted to match. Complete flexibility of installation eliminates clumsy multiple plugs and long unsightly extension cords. Plugmold is a product of the Wiremold Company, Hartford 10, Connecticut.

GENEERCO DOORS.—These doors merit specified by the architect for the new Case Study House meet the most exacting specifications and recommendations in wood laminates. All doors are 5-ply flush veneer with cores of Pine blocks of narrow widths. Adjacent blocks have staggered joints, and the core assembly is glued under pressure and heat using waterproof glue. Crossbanding of thoroughly kiln dried veneer and edge banding of the same hardwood as the face veneers are glued under pressure and heat. Face veneers are sanded to a smooth finish. Due to the controlled moisture content these doors, available in every type of veneer, are unaffected by climatic changes. They are manufactured by the General Veneer Manufacturing Company, 8652 Otis Street, South Gate, California.

SERVEL GAS REFRIGERATOR..—The Servel air-cooled gas refrigerator has been merit specified for the all-gas Case Study House. It operates on a simple, continuous absorption principle eliminating the necessity of moving parts in the refrigeration unit. The gas flame supplying the energy for operation is thermostatically controlled; a safety device prevents further flow of gas should the gas flame be extinguished. Insulation built into all sides is approximately 3" thick. The baked enamel exterior finish will not chip, crack or craze. Some noteworthy features of the Servel refrigerator are the large frozen food storage space which holds 70 lbs., the automatic defrosting, and the complete quietness of operation. Every Servel refrigerator is fully guaranteed for 10 years. They are made by Servel Inc., Evansville 20, Indiana.

LYTECASTER LIGHTING FIXTURES—A well-designed group of flexible contemporary fixtures engineered for maximum light without glare. The group contains stationary and adjustable ceiling fixtures, mobile pin to wall lighting and flexible long and short arm brackets.
Typical of the designs are the aspenslat reel ceiling lights which adjust from 18" to 72" from ceiling. Also skillful use of new materials, phenolics, plexiglass and aspenslat. They come in fresh colors, Terra Cotta, White, and Moss Green. Lytecasters are manufactured by Lightolier Company, Jersey City, New Jersey.
Calculite Recessed Lighting.—These square or round recessed fixtures using lens, concentric louvres, or albalite glass bring new and important advances to recessed lighting. Round types using patented Colouvered lens regressed above the ceiling line, erase filament image and bright glare while maintaining high light output. Square types use formed glass diffuser or flat albalite glass both with alzak reflectors for maximum lighting and minimum absorption.
New features on all models are Tortiontite spring fasteners for easier relamping by fingertip pressure from any side, no exposed screws, bolts, or hinges, built-in fiberglass gasket eliminating dust tracks and light leaks and self-leveling frame for snug ceiling fit.
Calculites have been chosen for the Case Study House for their superior quality easy installation and maintenance, and engineered lighting features. They are manufactured by Lightolier Company, Jersey City 5, New Jersey.

AMERICAN MAID SHOWER DOOR.—These shower doors have again been merit specified for the Case Study House. Built to the highest standard of workmanship they are noteworthy for the following features: sturdy non-corrosive aluminum frames, water-tight glass pressure set in neoprene, anti-drip channel and squeegie, and continuous piano hinge. American Maid Shower Doors are manufactured by the American Shower Door Company, Inc., 1028 North La Brea Avenue, Los Angeles 38, California.

PLEXOLITE.—A new glass fiber reinforced plastic sheet, both transparent and shatterproof, that does not sag, warp or crack and will withstand years of exposure in any climate without any significant changes in appearance. It is available in corrugated, plain or curved sheets in brilliant shades or soft pastel colors. Ease of installation and freedom from maintenance make Plexolite very economical. This excellent product is manufactured by Plexolite Corporation and distributed by Plexolite Sales Company, 4223 West Jefferson Boulevard, Los Angeles 16, California.

PREVIOUSLY NOTED:

Allenco Fire Hose Stations
Manufactured by W. D. Allen Manufacturing Company, Chicago 6, Illinois West Coast Office at 2330 West Third Street, Los Angeles 5

Aquella Waterproofing material
Manufactured by Prima Products, Inc., 10 East Fortieth Street, New York 16

Ceramic Mosaic Tile
Manufactured by The Mosaic Tile Company, Zanesville, Ohio; distributed in Southern California by The Mosaic Tile Company, 829 N. Highland, Hollywood 38

"Edco" Delayed Action Light Switch
Manufactured by Electric Deodorizer Corp., 9993 Broadstreet, Detroit 4, Mich.

Fasco Wall Ventilator
Manufactured by Fasco Industries, Inc., Rochester 2, New York and distributed through H. E. Gaygill, 409 Second Street, Los Angeles

Fiberglas Insulation
A product of Owens-Corning Fiberglas Corporation, Toledo 1

Gas-Fired Automatic Incinor
Manufactured by Bowser, Inc., Incineration Division, Cairo, Illinois.

General Water Heater
Manufactured by General Water Heater Corp., 1 East Magnolia Blvd., Burbank, Calif.

Glide-All Sliding Doors
Manufactured by Woodall Industries, Inc., 4326 Van Nuys Boulevard, Sherman Oaks, California

Globe Vanitory
Manufactured by the Globe-Wernicke Company, Cincinnati, Ohio
Distributed by Thomas W. Berger, Inc., 701 American Building, Cincinnati

Milwaukee Fluorescent Bathroom Cabinet
Manufactured by Northern Light Company, 1661 North Water Street, Milwaukee

Modernfold Accordion Doors
Manufactured by New Castle Products, Indiana, and distributed by Modern Building Specialties Company, 579 East Green Street, Pasadena, California

Moen Mixing Faucets
Manufactured by Moen Valve Company, a division of Ravenna Metal Products Corp., 6518 Ravenna Avenue, Seattle 5, Washington

NuTone Products
Manufactured by NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio, and distributed through NuTone, Inc., 1734 South Maple Street, Los Angles 15

Payne Perimeter Heating Unit
Manufactured by the Payne Furnace Company, Monrovia, California; the unit will be installed by La Brea Heating Co., 734 E. Hyde Park Blvd., Inglewood, Calif.

Portland Cement is manufactured by more than 150 different plants in 34 of the United States and in Canada.

Pumice Aggregate
Crownite is exclusively distributed in California by the Blue Diamond Corp., Los Angeles; Pacific Coast Aggregates, Inc., San Francisco; Squires-Belt Materials Company, San Diego

Ramset Fastening System
Ramset Fastening System, Inc., 12117 Berea Road, Cleveland 11

Revolvodor Wardrobes
Manufactured by Coast Store Fixture & Manufacturing Corporation, and marketed by Revolvodor Corporation, 1945 North Central Avenue, El Monte, California

Shirley Steel Kitchen Sink and Cabinets
Manufactured by the Shirley Corporation, Indianapolis 2, Indiana

Steelbilt Sliding Glass Doors and Windows
Manufactured by Steelbilt, Inc., 4801 East Washington Boulevard, Los Angeles 22

Superfan Portable Forced Air Blower
Manufactured by Queen Stove Works, Inc., Albert Lea, Minnesota

Thermodulor Forced Air Heating Controls
Manufactured by Carvell Heat Equipment Company, 1217 Temple Street, Los Angeles 26

Van-Packer Chimney
Manufactured by the Van-Packer Corporation, 209 South La Salle Street, Chicago 4

Western-Holly Automatic Built-in-Gas Cooking Units

Manufactured by Western-Holly Appliance Company, 8536 Hays Street, Culver City, California

CURRENTLY AVAILABLE PRODUCT LITERATURE AND INFORMATION

Editor's Note: This is a classified review of currently available manufacturers' literature and product information. To obtain a copy of any piece of literature or information regarding any product, list the number which precedes it on the coupon which appears below, giving your name, address, and occupation. Return the coupon to Arts & Architecture and your requests will be filled as rapidly as possible. Items preceded by a dot (•) indicate products which have been merit specified in the Case Study House Program.

APPLIANCES

• (956) Indoor Incinerator: Information Incinor unit for convenient disposal combustible refuse, wrappings, papers, garbage, trash; gas fired, unit is 35" high, 22" in diameter, weighs 130 pounds, has capacity of two bushels; heavy steel plate combustion chamber; AGC approved; excellent product, merit specified CSHouse 1952.—Incineration Division, Bowser, Inc., Cairo, Ill.

• (123a) Gas Ranges, Colored Tops: Illustrated color folder describing new 1951 Western-Holly gas ranges with pastel colored tops; tops available in pastel green, blue yellow, lifetime porcelain enamel to harmonize with kitchen colors; body of range in white enamel to avoid over-emphasis on color; other features include top-burner Tempa-Plates, disappearing shelf, vanishing grille, oversize expandable baking oven; well-designed, engineered, fabricated; merit specified CSHouse 1952.—Western Holly Appliance Company, Inc., Culver City, California.

ARCHITECTURAL PORCELAIN ENAMEL

(929) Architectural Porcelain Veneer; Brochure well illustrated, detailed, on architcetural porcelain veneer; glass-hard surface impervious to weather; permanent, color fast, easy to handle, install; lends well to all design shapes; inexpensive; probably best source of information on new, sound product.—Architectural Division, Porcelain Enamel Publicity Bureau, P. O. Box 186, East Pasadena Station, Pasadena 8, Calif.

CABINETS

• (124a) All-Steel Kitchens: Complete information, specification details, planning data Shirley all-steel kitchens; quality units, good contemporary design, excellent engineering; produced in standard series of individual matched units; sinks formed from deep-drawing 14-gauge porcelain-on-enamel to which acid-resistant glass-porcelain is permanently bonded; cabinets cold-rolled furniture steel, solidly spot-welded; finish inside and out baked-on synthetic enamel; flush door, drawer fronts, semi-concealed hinges; rubber bumpers on doors, drawers; exceptionally quiet operation; includes crumb-cup strainer or Consume-away food disposer unit; this equipment definitely worth close study, consideration; merit specified CSHouse 1952.—Shirley Corporation, Indianapolis 2, Ind.

DECORATIVE ACCESSORIES

(122a) Contemporary Ceramics: Information, prices, catalog contemporary ceramics by Tony Hill; includes full range table pieces, vases, ash trays, lamps, specialties; colorful, well fired, original; among best glazes in industry; merit specified several times CSHouse Program magazine Arts & Architecture; data belongs in all contemporary files.—Tony Hill, 3121 West Jefferson Boulevard, Los Angeles, Calif.

(137a) Contemporary Architectural Pottery: Information, illustrative matter excellent line of contemporary architectural pottery designed by John Follis and Rex Goode; large man-height pots, broad and flat garden pots; mounted on variety of black iron tripod stands; clean, strong designs; data belongs in all files.—Architectural Pottery, 3562 Meier Street, Venice, California.

(426) Contemporary Clocks: Attractive folder Chronopak contemporary clocks designed by George Nelson; 15 crisp,

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No.	No.	No.	No.	No.
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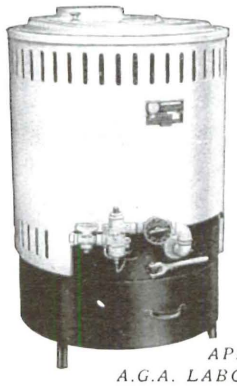
OCCUPATION

NOTE: Literature cannot be forwarded unless occupation is shown.

AUTOMATIC GAS-FIRED INCINOR

The Modern Home Incinerator



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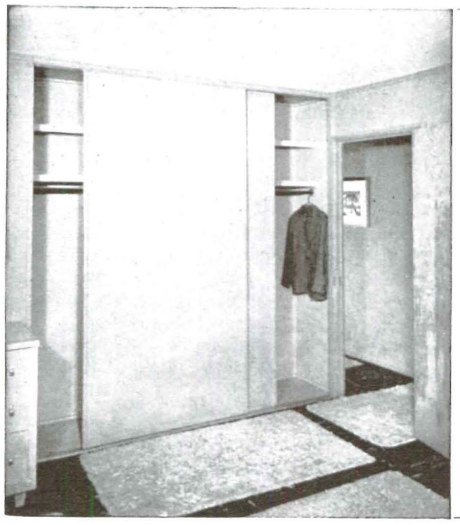

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simple, unusual models; one of best sources of information; worth study, file space.—Howard Miller Clock Company, Zeeland, Mich.

• (152) Door Chimes: Color folder NuTone door chimes; wide range styles, including clock chimes; merit specified CSHouse 1952.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

(161a) Highly original fabrics for custom lamp shades. Contemporary in design, utilizing unusual and striking decorative details. Individually designed to carry out all specified decorative motifs. Most unusual. Fabulous Fabrics.—8273 Clinton Street, Los Angeles 48, Calif.

FABRICS

(171a) Contemporary Fabrics: Information one of best lines contemporary fabrics by pioneer designer Angelo Testa. Includes hand prints on cottons and sheers, woven designs and correlated woven solids. Custom printing offers special colors and individual fabrics. Large and small scaled patterns plus a large variety of desirable textures furnish the answer to all your fabric needs; reasonably priced. Angelo Testa & Company, 49 East Ontario Street, Chicago 11, Illinois.

(148a) Fabrics: Sample book available to qualified buyers, architects, designers, interior decorators, etc. Good collection, both Belgium and English imported linens. Large line of woven textures, specializing contemporary fabrics. Also broadly diversified line casements. Wide color ranges. Harmill Fabrics. 106 S. Robertson Blvd., Los Angeles 48, Calif.

FLOOR COVERINGS

(89a) Carpet Strip, Tackless: Full color brochure detailing Smoothedge tackless carpet strip: Works on curtain stretcher principle; eliminates tack indentations, uneven installations. — The Roberts Company, 1536 North Indiana Street, Los Angeles 63, Calif.

(989) Custom Rugs: Illustrated brochure custom-made one-of-a-kind rugs and carpets; hand-made to special order to match wallpaper, draperies, upholstery, accessories; seamless carpets in any width, length, texture, pattern, color; inexpensive, fast service; good service, well worth investigation.—Rugcrofters, Inc., 143 Madison Avenue, New York 16, N.Y.

(309) Rugs: Catalog, brochures probably best known line contemporary rugs, carpets; wide range colors, fabrics, patterns; features plain colors. —Klearflax Linen Looms, Inc., Sixty-third St. at Grand Ave., Duluth, Minn.

FURNITURE

(138a) Contemporary Furniture, Accessories, Fabrics: Full information complete line top contemporary furniture, accessories, fabrics; Dunbar, Herman Miller, Howard Miller, Eames, Knoll, Pascoe, Glenn, Middletown, Risom, Pacific Iron, Ficks Reed, Nessen, Pechanec, Modern Color, Laverne, Finland House, Ostrom-Sweden, Swedecraft, Hawk House, Kurt Versen, Follis & Goode, Gotham, Milano, Heath, Stimulus, Raymor; offers complete safety on level of authenticity; special attention to mail order phase of business; data belongs in all files.—Carroll Sagar & Associates, 7418 Beverly Boulevard, Los Angeles 36, California.

(169a) Contemporary Furniture—New 28-page illustrated color brochure gives detailed information Dunbar new modern furniture designed by Edward Wormley; describes upholstered pieces, furniture for living room, dining room, bedroom, case goods; woods include walnut, hickory, birch, cherry; good design, quality hardware; careful workmanship; data belongs in all files; send 25 cents to cover cost; Dunbar Furniture Corp. of Indiana, Berne, Indiana.

(168a) Furniture, Accessories, Retail: A remarkably comprehensive selection of contemporary furniture, fabrics and accessories. Emphasis on good design. Equipped for execution of interiors. commercial and residential.—Dan Aberle, 14633 Ventura Blvd., Sherman Oaks, Calif.

(172a) Contemporary Furniture—Clean, simple lines. Foam rubber and steel construction in modern spirit. Sofa-daybed, dining and occasional chairs, dining and coffee tables, stacking stools and accessory pieces. Also grouping of casual utility and storage pieces incorporating imported woven materials expressing the warmth of craftsmanship combined with precision production. All pieces admirably suited for and complimentary to the best in modern living. Modern Color, Inc., 2025 San Fernando Road, Los Angeles 65, Calif.

(85a) Contemporary Furniture, Daybed: Information new retail outlet good lines contemporary furniture, accessories; includes exceptionally well designed Felmore day bed; seat pulls forward providing generous size single bed; 4½" thick foam rubber seat, fully upholstered reversible seat cushion, permanent deep coil spring back; frame available in walnut, oak, ash, black; legs aluminum or black steel; reasonably priced, shipped anywhere in country; this is remarkably good piece, deserves close attention.—Felmore Associates, 15221 Sunset Boulevard, Pacific Palisades, Los Angeles, Calif.

(167a) Contemporary Danish and Swedish: Finest examples of imported contemporary Danish and Swedish Furniture. Outstanding design and quality of craftsmanship. Information available to leading contemporary dealers and interior decorators.—Pacific Overseas, Inc., 200 Davis Street, San Francisco 11, California.

(157a) The Contour Chair Lounge—the first radical departure from conventional furniture; blends with every period and goes in any room; the genine Contour Chair Lounge with premolded contour will fit every height person, because it is made in six sizes; takes up less space and is more comfortable and graceful than club chair with ottoman. Upholstered in plastic or decorator fabrics. Finest construction — Marie Designer, Inc., 8512 Sunset Blvd., Hollywood 46. Calif.

(323) Furniture, Custom and Standard: Information one of best known lines contemporary metal (indoor-outdoor) and wood (upholstered) furniture; designed by Hendrik Van Keppel. and Taylor Green—Van Keppel Green. Inc., 9501 Santa Monica Boulevard. Beverly Hills, Calif.

(975) Furniture in Kit Form: Information well designed contemporary string. tape chairs in unfinished knocked-down kits ready for assembly; also tables; available by mail order at very reasonable prices; also prefinished at slightly higher prices; well worth investigation. —Calfab Furniture Company, Post Office Box 215, San Gabriel, Calif.

(316) Furniture: Information top lines contemporary furniture designed by Eames, Naguchi, Nelson.—Herman Miller Furniture Company, Zeeland, Mich.

(314) Furniture, Retail: Information top retail source best lines contemporary lamps, accessories, fabrics; designs by Eames, Aalto, Rhode, Naguchi, Nelson; complete decorative service.—Frank Brothers, 2400 American Avenue, Long Beach, Calif.

(6a) Modern Office Furniture: Information one of West's most complete lines office, reception room furniture: modern desks, chairs, tables, divans matching accessories in woods, metals: wide range competitive prices on commercial, custom pieces: professional trade discounts.—United Desk Company, Twelfth and Olive Streets, Los Angeles, Calif.

(15a) Swedish Modern: Information clean, well designed line of Swedish modern furniture; one of best sources. —Swedish Modern, Inc., 675 Fifth Avenue, New York 22, N. Y.

(147a) Wholesale Office Furniture: Information: Open showroom for the trade, featuring Desks, Upholstered Furniture, and related pieces. Exclusive Lines, from competitive, to the ultimate in design, craftsmanship, and finish available in the office furniture field. Watch for showing, late this month, of the new modular cantilevered line—an entirely new concept in office engineering. Spencer & Company, 8327 Melrose Ave., Los Angeles, California.

(141a) Contemporary Upholstered Pieces: Information, illustrative data new Palisades Group contemporary upholstered pieces designed by Greta Magnusson Grossman for living rooms, dens; includes sectionals, chairs, sofas; foam rubber construction; also information factory designs including apartment and full scale pieces in foam rubber construction; clean. articulate lines; reasonably priced; well worth appraisal, consideration. Martin Brattrud, Post Office Box 71, Gardena, California.

HARDWARE

• (58a) Single Handle Mixing Faucets: Folder, data Moen single handle mixing faucets; turns water on by lifting handle, off by pressing down; turn to left makes water hot, to right makes water cold; deck-type, wall-type, both old and new sinks, single and divided sinks, kitchen, lavatory, laundry room. bars, special doctors' and dentists' types available; highly practical, precision engineered, well designed; this item deserves close inspection; merit specified for CSHouse 1952.—Ravenna Metal Products Corporation, 6518 Ravenna Avenue, Seattle 5, Wash.

HEATING & AIR CONDITIONING

• (9a) Automatic Kitchen Ventilators: Folder Fasco automatic kitchen ventilators; keeps kitchens clean, cool, comfortable; expel steam, grease, cooking odors; outside wall, inside wall, "ceiln-wall" installations; completely automatic, easy to install, clean; Fasco Turbo-Radial impeller; well engineered, well designed; merit specfied for CS-House 1952.—Fasco Industries, Inc., Rochester 2, N. Y.

• (143a) Combination Ceiling Heater, Light: Comprehensively illustrated information, data on specifications new NuTone Heat-a-lite combination heater, light; remarkably good design, engineering; prismatic lens over standard 100-watt bulb casts diffused lighting over entire room; heater forces warmed air gently downward from Chromalox heating element; utilizes all heat from bulb, fan motor, heating element; uses line voltage; no transformer or relays required; automatic thermostatic controls optional; ideal for bathrooms, children's rooms, bedrooms, recreation rooms; UL-listed; this product definitely worth close appraisal; merit specified CSHouse 1952—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

(542) Furnaces: Brochures, folders, data Payne forced air heating units, including Panelair Forced Air Wall heater, occupying floor area of only 29—⅜" x 9⅜"; latter draws air from ceiling, discharges near floor to one or more rooms; two speed fan.—Affiliated Gas Equipment, Inc., 801 Royal Oaks Avenue, Monrovia, Calif.

(994) Heating Facts: Remarkably well prepared 20-page question-and-answer brochure "How to Select Your Heating System" featuring Lennox heating equipment, now available; practical, readable information by world's largest manufacturers; should be in all files.—Dept. AA-5, The Lennox Furnace Company, 974 South Fair Oaks Avenue, Pasadena.

• (827) Kitchen Ventilating Fans: Well illustrated 4-page folder featuring new NuTone kitchen ventilating fans; wall ceiling types; more CFM than competitive models in same price range; only screw driver needed to install; quickly removable grille, lever switch, motor assembly rubber mounted; well designed, engineered; merit specified for CSHouse 1952.—NuTone, Inc., Madison and Red Bank Roads, Cincinnati 27, Ohio.

• (156a) Modulated Heat Flow: How to Tame Your Forced Air Heating. Describes Thermodulor controls, engineering achievement for modulated control of forced air heating. Any furnace operated by Thermodulor control (instead of ordinary on-off, full-operation only, controls) provides heating comfort free from such defects of on-off operation as: cold blasts at starts, then hot blasts and overheating; uneven temperature and uneven distribution of heat; cold floors and chilly drafts; noisy furnace and blower operation. This improvement provides modulated warm air flow that is continuous while heat is needed and modulated in temperature and velocity in accordance with comfort requirements. The result is soft, even, modulated heat flow, always at just the right temperature and velocity for comfort. Thermodulor controls distributed through authorized heating dealers and contractors by Carvell Heat Equipment Co., 1217 Temple Street, Los Angeles 26, California. MA. 9-1491.

• (127a) Registers, Grilles: Comprehensive 44-page illustrated catalog giving complete information, technical data, sizing charts Hart & Cooley registers, grilles; include full range gravity and

air conditioning, furnace accessories; good source of information, particularly in terms of installation, requirement features; well worth file space; these products merit specified CSHouse 1952. —Hart & Cooley Manufacturing Company, Holland, Mich.

(907) Quick Heating: Comprehensive 12-page catalog featuring Markel Heetaire electrical space heeters; wall-attachable, wall-recessed, portable; photographs, technical data, non-technical installation data; good buyer's guide.—Markel Electric Products, Inc., Buffalo 3, N. Y.

(142a) Residential Exhaust Fans: Complete information installation data Lau Niteair Rancher exhaust fan for homes with low-pitched roofs; quiet, powerful, reasonably priced, easily installed; pulls air through all rooms, out through attic; available in four blade sizes; complete packaged unit horizontally mounted with belt-driven motor; automatic ceiling shutter with aluminum molding; automatic time switch optional; rubber cushion mounted; well engineered, fabricated.—The Lau Blower Company, 2017 Home Avenue, Dayton 7, Ohio.

LIGHTING EQUIPMENT

(34a) Accent and Display Lighting: Brochure excellently designed contemporary Amplex "Adapt-a-Unit" Swivelite fixtures; clean shapes, smart appearance, remarkable flexibility, ease of handling; complete interchangeability of all units, models for every type of dramatic lighting effects; includes recessed units, color equipment; information on this equipment belongs in all files.—Amplex Corporation, 111 Water Street, Brooklyn 1, New York.

(170a) Architectural Lighting: Full information new Lightolier Calculite fixtures; provide maximum light output evenly diffused; simple, clean functional form: square, round, or recessed with lens, louvres, pinhole, albalite or formed glass; exclusive "torsiontite" spring fastener with no exposed screws, bolts, or hinges; built-in fibreglass gasket eliminates light leaks, snug self-leveling frame can be pulled down from any side with fingertip pressure, completely removable for cleaning; definitely worth investigating.—Lightolier, 11 East Thirty-sixth Street, New York, New York.

(159a) Decorative Lighting: Custom-made lighting fixtures, residential and commercial, specially designed by our staff of designers and artists and executed by skilled craftsmen. Designing service available on modern and period styling; special attention given to your specifications and design.—Sidney C. Dorner Company, 548 North La Cienega Boulevard, Los Angeles 48, California.

(782) Fluorescent Luminaries: New two-color catalog on Sunbeam Fluorescent Luminaries; clear, concise, inclusive; tables of specifications; a very handy reference.—Sunbeam Lighting Company, 777 East Fourteenth Place, Los Angeles 21, Calif.

(119a) Recessed and Accent Lighting Fixtures: Specification data and engineering drawings Prescolite Fixtures; complete range contemporary designs for residential, commercial applications; exclusive Re-lamp-a-lite hinge; 30 seconds to fasten trim, install glass or relamp; exceptional builder and owner acceptance, well worth considering.—Pressteel Company, 802 Bancroft way, Berkeley 2, California.

(Z7A) Contemporary Commercial Fluorescent, Incandescent Lighting Fixtures: Catalog, complete, illustrated specification data Globe contemporary commercial fluorescent, incandescent lighting fixtures; direct, indirect, semi-indirect, accent, spot; remarkably clean design, sound engineering; one of most complete lines; literature contains charts, tables, technical information; one of best sources of information on lighting.—Globe Lighting Products, Inc., 2121 South Main Street, Los Angeles 7, Calif.

(909) Architectural Lighting: Exceptionally well prepared 36-page catalogue architectural lighting by Century for stores, display rooms, show windows, restaurants, museums, churches, auditoriums, fairs, exhibits, hotels, night clubs, terminals; features optical units, downlites, decorative units, reflector units, fluorescent units, spots, floods, strips, special signs, color media, dimmers, lamps, controls; full data, including prices; worth study, file space.—Century Lighting, Inc., 419 West Fifty-fifth Street, New York 19, New York.

(964) Bank, Office Lighting: Brochure planned lighting for banks, office; covers recent advances use standard lighting equipment for architectural, illuminating results and influences properly maintained foot-candle levels to improve efficiency, increase working accuracy, add visual comfort; data costs, installation, maintenance; well illustrated; one of best sources information on subject.—Pittsburgh Reflector Company, 452 Oliver Building, Pittsburgh 22, Pa.

(155a) Contemporary Lighting Fixtures: Complete range of fixed and adjustable recessed units, dome lights, lamps; articulate new shapes in modern finishes, reel lights; new concepts in ceiling and wall mounted candelabra fixtures.—Showroom: Gruen Lighting, 8336 West Third Street, Los Angeles, California.

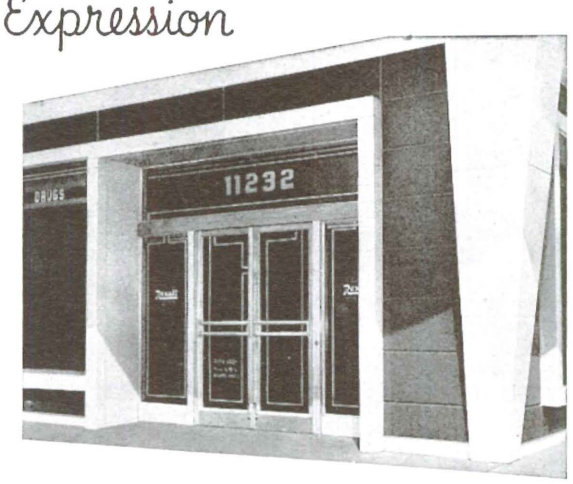
(910) Theatrical Lighting: Smartly designed 48-page catalogue showing best in contemporary theater lighting for state, exhibits, window displays, pageants, fashion shows, dance halls, cabarets, night clubs and fairs by Century; lights, special equipment, control equipment, accessories; one of most complete workbooks published, completely illustrated and with prices; this is a must.—Century Lighting, Inc., 419 West Fifty-fifth Street, New York 19, New York.

(965) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, downlights incorporating Corning wide angle Pyrex lenses; recessed, semi-recessed, surface-mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination; selected units merit specified for CSHouse 1950. —Ledlin Lighting, Inc., 49 Elizabeth Street, New York 13, N.Y.

MISCELLANEOUS

(360) Telephones: Information for architects, builders on telephone installations, including built-in data.—P. E. Dvorsky, Pacific Telephone & Telegraph Company, 740 South Olive Street, Los Angeles 55, Calif.

Creative Architectural Expression



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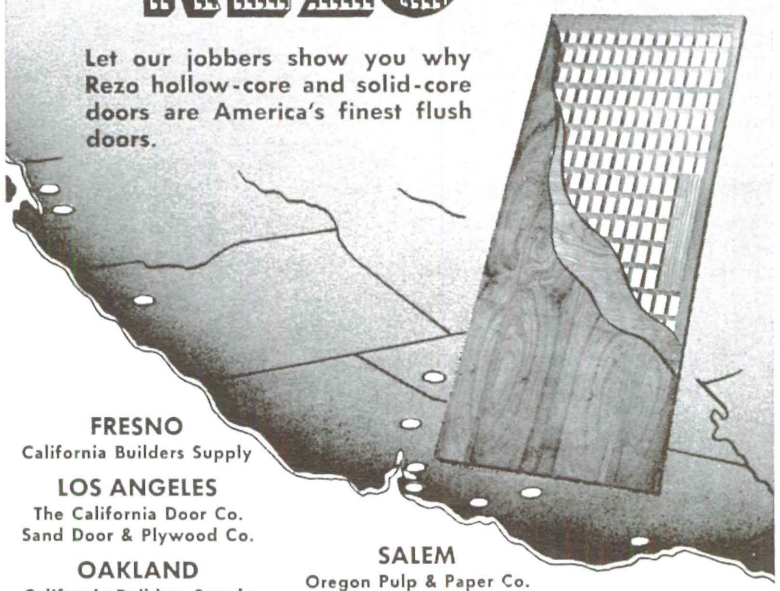

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PAINTS, SURFACE TREATMENTS

(938) Paint Information Service—authoritative, complete—especially for Architects. Questions to all your finish problems answered promptly and frankly, with the latest information available. No obligation. Also color samples and specifications for L. & S Portland Cement Paint, the unique oil-base finish for cement masonry, galvanized steel. Used on the West's most important jobs. Write to General Paint Corp., Architectural Information Department, 2627 Army St., San Francisco 19, Calif.

(925) Portland Cement Paint: Folder L & S Portland Cement paint merit specified for use CSHouse 1950; for concrete, stucco, masonry, new galvanized iron, other surfaces; long wearing won't absorb moisture, fire retardant; easy to apply with brush, spray; used for 30 years.—General Paint Corporation, 2627 Army Street, San Francisco. Calif.

(924) Sash and Trim Colors: Folder strong, durable sash and trim colors ground in treated oils: pure. light-fast pigments combined with specially formulated synthetics; won't check, crack, withstands discoloration, retains gloss, flows easily but won't run, sag; good hiding capacity; worth investigation.—General Paint Corporation, 2627 Army Street, San Francisco, Calif.

(162a) Zolatone Process: Information on new revolutionary painting system; true multi-color paint permits application to a surface of multi-color pattern in single spray coat; no special spray equipment required nor special techniques; multiple colors exist separately within Zolatone finish, do not merge nor blend; intermixing of varying ratios of colors and sizes of aggregates produces infinite number of possible multi-color blends; washable, exceptionally abrasion resistant; provides excellent finish for most materials used in building construction: wood, metal, plaster, cement, stone, glass, tile, wall boards, Masonite, paper; tends to conceal flaws and surface imperfections; used to paint exterior surface of new J. W. Robinson Building in Beverly Hills; information belongs in all files.—Manufactured by Paramount Paint and Lacquer Company, 3431 E. 15th St., Los Angeles 23.

PANELS AND WALL TREATMENTS

(902) Building Board: Brochures, folders Carrco Wallboard, which is fire resistant, water resistant, termite proof, low in cost, highly insulating, non-warping, easy to work, strong, covered with one paint coat, finished on both sides, semi-hard, and uniform; 4'x8' sheets ¼" in thickness; merits close attention. —L. J. Carr Company, Post Office Box 1282, Sacramento, Calif.

(585) Etchwood Panels: Literature Etchwood, a "3-dimensional plywood" for paneling, furniture, display backgrounds; soft grain burnished away leaving hardwood surface in natural grain-textured surface; costs less than decorative hardwood plywood; entirely new product, merits close consideration. — Davidson Plywood & Lumber Company, 3136 East Washington Boulevard, Los Angeles, Calif.

(160a) Mosaic Clay Tile for walls and floors—indoors and out. The Mosaic Line includes new "Formfree" Patterns and Decorated Wall Tile for unique random pattern development; colorful Quarry Tile in plain and five "non-slip" abrasive surfaces; and handcrafted Faience Tile. The Mosaic Tile Company, 829 North Highland, Hollywood 38. HIllside 8238.

(164a) Wallpapers: Information Katzenbach and Warren latest "architecttural" wallpaper collection. This sculpture wallcovering is a three-dimensional moulded material of great durability, fadeproof, waterproof; especially noteworthy are hand-screened papers simulating materials: Roman Brick, Ancient Wall, Melton Marble, Mosaic; other interesting papers include Spanish Doors and Mirage of Mexican and Guatemalan inspiration. Katzenbach and Warren, Inc., 575 Madison Avenue, New York 22, New York.

PLUMBING FIXTURES, ACCESSORIES

(826) Bathroom cabinets: Folder bathroom cabinets, one piece drawn steel bodies, bonderized after forming; also chrome bath accessories and wall mirrors.—F. H. Lawson Company, Cincinnati, Ohio.

(55) Water Heaters, Electric: Brochure, data electric water heaters: good design.—Bauer Manufacturing Company. 3121 W. El Segundo Boulevard, Hawthorne, California.

ROOFING

(995) Aluma-Life Roofing: Folders, specification data light-weight Aluma-Life roofing; uses aluminum foil, 99.4 per cent pure, between cotton gum base layers with a coating of marble or granite chips of selected colors; rated "A" by National Board of Fire Underwriters, approved by FHA; hurricane specifications; insulation value equals 2" of mineral wool; particularly good for modern design.—Aluminum Building Products, Inc., Route 1 Atlantic Boulevard, Jacksonville 7, Fla.

(33a) Flashing Service: Brochures Revere-Keystone Interlocking Thru-Wall Flashing, Revere-Simplex Reglet System for Flashing Spandrel Beams, and Master Specifications for Copper Roofing and Sheet Metal Work; these brochures, comprising one of best sources, belong in all files.—Revere Copper and Brass Incorporated, 230 Park Avenue, New York 17, N. Y.

SASH, DOORS AND WINDOWS

(522) Awning Windows: Brochure Gate City Awning Windows for homes, offices, apartments, hotels; controlled by worm and gear drive operating two sets of raising mechanisms distributing raising force to both sides of sash; standard and special sizes; contemporary design. —Gate City Sash & Door Company, 15 Southwest Third Avenue, Fort Lauderdale, Fla.

(356) Doors, Combination Screen-Sash: Brochure Hollywood Junior combination screen-metal sash doors; provides ventilating screen door, sash door, permanent outside door all in one.—West Coast Screen Company, 1127 East Sixty-third Street, Los Angeles, California (in 11 western states only).

(901) Hollow Core Flush Door: Brochure Paine Rezo hollow core flush door featuring interlocking air-cell grid core combining the strength of cross-banded plywood with lightness in weight; accurately mortised and framed together, and overlaid with matched resin-glued plywood panels; one of best products in field.—L. J. Carr and Company, P. O. Box 1282, Sacramento, Calif.

(163a) Horizontal Sliding Glass Doorwalls: Unique 8-page brochure—detail and isometric drawings; also 16-page illustrated editorial reprinted from Arts and Architecture; installation and full scale cross sectional details; pioneer and leading producer; top roller-hung and bottom roller types; many exclusive important engineering features; sealed against wind and water; available in hot-dip galvanized, or bonderized under zinc chromate primer; Thermo-glaze, Thermopane and T window units; minimal maintenance; favored by leading contemporary architects; carefully engineered, quality product; completely factory assembled—no loose parts.—Steelbilt, Inc., 4801 E. Washington Blvd., Los Angeles 22, Calif.

(165a) Wardrobe Sliding Doors: Full information, specification data Glide-All sliding doors for low-cost, highly functional wardrobes, closets; floor-to-ceiling installation eliminates studding, framing and plastering time; easily adaptable to less-than-standard heights; smoothly-finished extruded aluminum alloy floor track, threshold type; velvet finished aluminum allow channel top track guides and conceals rollers; quiet, smooth, dependable operation; easily installed. Suited for domestic or commercial buildings; one of the best products in field.—Jule Meyn, Jr., 4326 Van Nuys Boulevard, Sherman Oaks, Calif.

(117a) Stock Sash: Information new Kawneer stock sash; designed for modern building needs; new glazing assembly; attractive appearance; resilient-grip principle insures maximum safety, reliability; strong steel clip minimizes breakage due to sudden shocks, high winds, building settling; data belongs in all files.—The Kawneer Company, 1105 North Front Street, Niles, Mich.

SOUND CONDITIONING

(800) Acousti-Celotex Sound Conditioning: Products for every sound conditioning problem; Fissuretone, a new and "different" random-fissured surface, gives a beautiful new pattern and style to Sound Conditioned ceilings. Is highly sound absorbent, lightweight, rigid, incombustible. Suited for commercial or domestic buildings; Gates Ferguson, The Celotex Corporation, 120 So. La Salle St., Chicago 3, Ill.

SPECIALTIES

• (106a) Accordion-Folding Doors: Brochure, full information, specification data Modernfold accordion-folding doors for space-saving closures and room division; permit flexibility in decorative schemes; use no floor or wall space; provide more space; permit better use of space; vinyl, durable, washable, flame-resistant coverings in wide range colors; sturdy, rigid, quiet steel working frame; sold, serviced nationally; deserves closest consideration; merit specified CSHouse 1952.—New Castle Products, Post Office Box 823, New Castle, Ind.

• (116a) Packaged Chimneys: Information Van-Packer packaged chimneys; economical; saves space, hangs from ceiling or floor joists; installed in 3 man-hours or less; immediate delivery to job of complete chimney; meets FHA requirements; worth contacting; merit specified CSHouse 1952.—Van-Packer Corporation, 122 West Adams Street, Chicago 3, Illinois.

(23a) Swimming Pools: Well prepared book "Planning Your New Swimming Pool" giving full data Paddock swimming pools; nationally known, widely accepted; one of best sources of information on subject. — Paddock Swimming Pools, 8400 Santa Monica Boulevard, Los Angeles 46, Calif.

STRUCTURAL BUILDING MATERIALS

150a) Cofar Reinforcement that Forms: Illustrated catalog, complete details Cofar concrete construction; employs Cofar steel for positive reinforcement and form in concrete floor and roof slabs, completely eliminating conventional positive re-bars, temperature bars and wood forms; tough temper, deep corrugated steel cut to fit building panels up to 14-foot spans, with transverse wires welded across corrugations in manufacture; hot dip heavy galvanizing insures building life permanence. Equally suited to concrete or steel frame construction, Cofar is extensively used in recent tall building construction with important material, time, and cost savings. Cofar, thanks to remarkable economy, is increasingly used for residential first floors; provides attractive non-combustible basement ceiling in residential construction. Approved by West Coast Bldg. Officials Conference.—Granco Steel Products Co. Granite City, Ill.

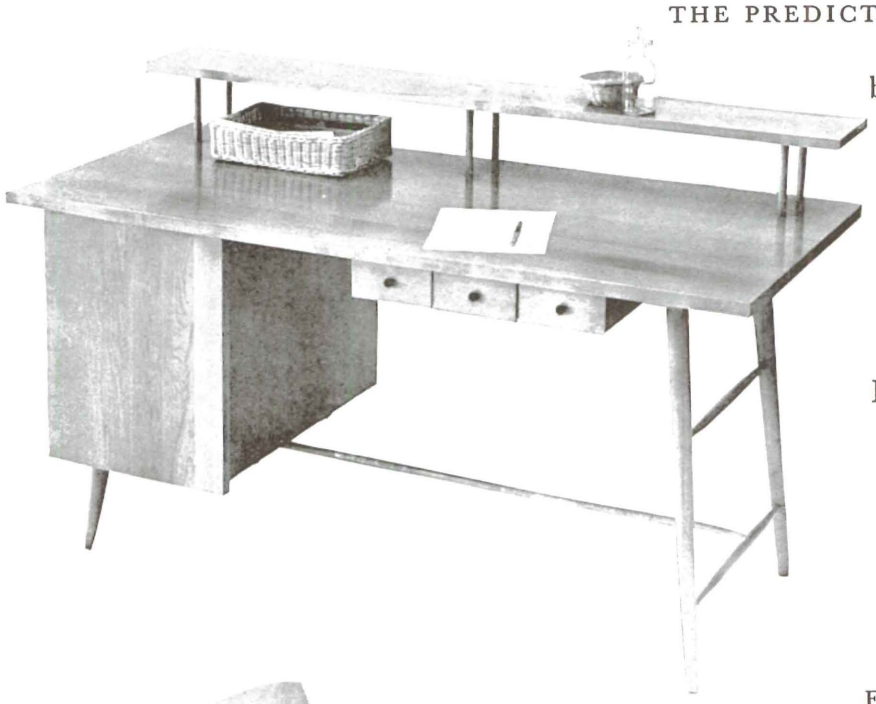
(970) Douglas Fir Plywood: Basic 1950 catalog giving full data Douglas Fir Plywood and its uses; deliniates grades, features construction uses, physical properties, highlights of utility; tables on nail bearing, acoustics, bending, rigidity, insulation, condensation; full specification data; undoubtedly best source of information, belongs in all files.—Douglas Fir Plywood Association, Tacoma Building, Tacoma 2, Wash.

(149a) Steel Roof Deck: Descriptive booklet with physical properties, complete loading tables, suggested specifications Granco Steel Roof Deck; rotary-press formed sheets for uniform pattern; most effective shape, longitudinal ribs 1⅝" deep (same thickness as 2"x4") spaced on 5¾" centers; wide cover width of 28¾"; maximum sheet length 14'-4"; available in 18, 20 or 22 gauge; attractive, durable finish; quick to erect; worth close investigation.—Granco Steel Products Company, Subsidiary of Granite City Steel Company, Granite City, Illinois.

VISUAL MERCHANDISING

(152a) Visual Merchandise Presentations; 80-page brochure illustrates Spacemaster flexible merchandising equipment adaptable to all lines of merchandise; permits maximum display in minimum floor area; also, suggestions, ideas, layouts. Finest manual of its type today.—Reflector-Hardware Corporation 2245 S. Western Ave., Chicago 8, llinois.

THE PREDICTOR GROUP...



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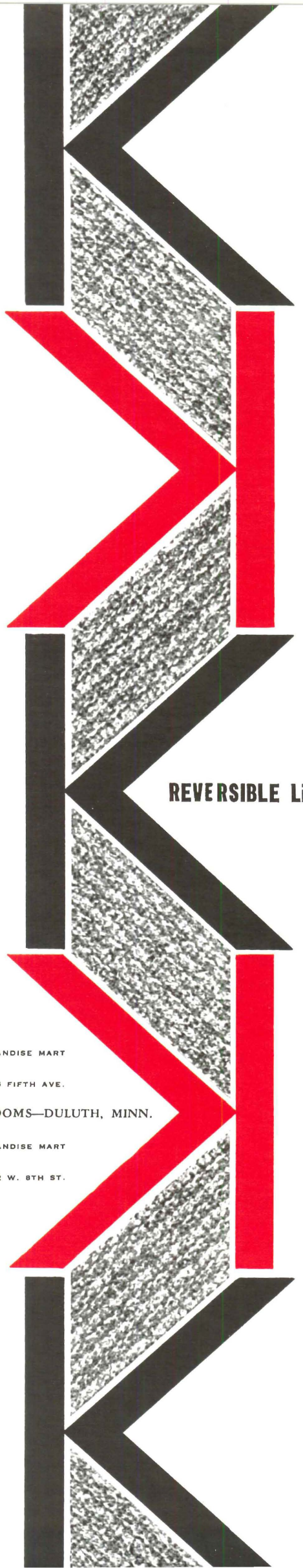

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